

# Willis Products



**CATALOG No 8**

MANUFACTURERS OF  
**SHEET METAL**  
**BUILDING PRODUCTS**

**Willis Manufacturing Co.**  
**Galesburg, Illinois**  
**U.S.A.**



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## Catalog Number Eight

OF THE

# Willis Manufacturing Company

INCORPORATED 1891

AUTHORIZED CAPITAL, \$250,000.00

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MANUFACTURERS AND JOBBERS OF

## Architectural Sheet Metal Goods

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OFFICE AND FACTORY:

152 to 160 North Academy Street

GALESBURG, ILLINOIS

U. S. A.



## ANNOUNCEMENT

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IN presenting our General Catalog Number Eight to the building trades and architectural profession we feel that it is deserving of careful consideration and a place in your permanent files for constant reference for the reason that we have compiled in this book valuable reference matter, as well as list prices.

It is our intention to keep the users of this catalog supplied with current discount sheets, giving the book an added and intrinsic value.

This catalog supersedes all previous catalogs. On account of changes in catalog numbers and list prices, all old issues should be discarded and application made for discount sheet applying to this issue. In arranging the matter contained herein, collecting the data and selection of designs we have carefully considered the present day requirements and needs, selecting only such as we deem best suited to serve their purpose.

The engravings and descriptions have been prepared with the greatest care to cover the essential points clearly and concisely, to represent the goods as they are. All parts have been revised and rearranged to make them easily and quickly understood.

Quality and thoroughness in the conduct of every phase of this business will be adhered to and emphasized in a manner that will insure satisfaction to the trade. We believe we are right in refusing to make up our products in a manner that would sell, but would not live, because the merits of our work have won for us an enviable reputation which is our constant endeavor to maintain and extend. We solicit your orders and inquiries. Our entire physical and mental equipment is at your disposal and we are ready at any time to extend to you every courtesy.

WILLIS MANUFACTURING COMPANY





## Notes of Importance

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**REQUEST:** After receipt of this catalog do not use an old issue because our records will show you as having a copy of this latest catalog and we will naturally assume you are specifying from this issue.

**TERMS:** Unless we have otherwise specified or agreed upon, all invoices are payable thirty days net or 2% in ten days from date of invoice, in funds current in Chicago or New York. Do not send us personal checks, as banks charge us exchange at the rate of ten cents per one hundred dollars or fractional part thereof. When accounts are not paid at maturity we will send you a regular statement with notice that we will draw on you at a certain date unless we receive payment prior to that date.

**DELIVERIES:** All deliveries are subject to delay caused by strikes, fires or causes beyond our control. Unless otherwise specified or agreed upon, prices are always F. O. B. Cars at Galesburg, Ill. When prices are quoted, delivered, it refers to the freight charges only and not to the safe delivery of the materials, after proper shipping receipts have been issued us. Parcel post and express packages sent at purchaser's risk unless we have been requested to insure.

**GUARANTEE:** We will replace any piece of goods furnished by us, free of charge, found defective in workmanship or material, providing they have been used in a workmanlike manner.

**RETURNED GOODS:** Except by mutual agreement *do not* return any materials. When writing about any particular order specify the date of your order, our number and date of our invoice.

**CLAIMS:** Claims for errors or omissions must be made within five days of receipt of goods. Errors are made by the best, and we stand ready to correct those made by us and expect our customers to accept liability of their own mistakes.

**ENGINEERING DEPT.:** We maintain a drafting force which is at the service of our customers without charge when designing work along our line.





# WILLIS SKYLIGHTS

## Maximum Light Perfect Ventilation

As manufacturers for over thirty years of skylights, we have through that period, been constantly experimenting and as a result of these experiments, have attained a knowledge of construction of this product which enables us to give our customers the greatest of values. By this we mean the grade of materials used, the workmanship and the numerous methods employed which simplify the construction and erection of our skylights.

While we will manufacture from any grade of sheet metal obtainable, unless otherwise specified, galvanized open hearth steel will be used.

Our workmen are all experienced mechanics, who are thoroughly familiar with their trade. They have all been in our factory for a number of years and take pride in producing skylights of the highest quality and the finest workmanship.

We employ numerous methods in our design which make the erection of our skylights a simple matter. It is not necessary that our customers employ mechanics to do their erection work. Our skylights are manufactured in sections, completely assembled at the factory and knocked down for shipment. This method gives our customers the advantage of lower freight classifications and rates. The average workman, and he need not be a mechanic, can completely assemble the different parts and the only tools he will require are a hammer and screwdriver.

Our skylights are all water-tight, without the use of putty. Putty can be used when the small amount of dust that might blow into the building would be objectionable. Our skylights are provided with condensation gutters on all bars and at the eaves and are guaranteed not to leak.

The construction is designed to give the largest possible glass area without sacrificing strength. It is impossible for any part to sag, buckle or bend. We will always provide ample reinforcement if the size demands this precaution. From our past experience we have learned that the sizes listed on page 10 will not need these reinforcements.

In referring to skylight sizes we speak of the outside curb measurements. These measurements are taken over the roofing materials which should be flashed up even with the top edge of the curb. The curbs may be built to any height above the sheathing however six inches is the usual height. When the curbs are properly built and flashed it is then a simple task to quickly complete the job of placing the skylight on the curb. The apron which counter-flashes the curb is a part of the skylight. We do not furnish the wood curbs. Curbs for all styles excepting the No. 50-S, No. 90-S and No. 95-S are to be built level on the top. The curbs for these three styles may be built to any pitch desired although they are usually built to the same pitch as the roof.

We call our customers' special attention to the construction of skylight curbs. These must be of sufficient strength to withstand the outward thrust of the skylight and not sag or buckle under its weight.

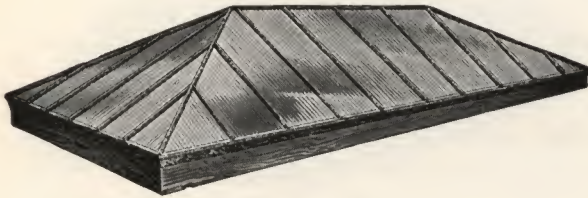
We construct skylights to any size required. It is therefore not necessary to confine yourself to the sizes given on page 10.

Our equipment is so very complete that we are confident of our ability to handle successfully any requirement that might be submitted to us. Should your requirements necessitate reinforced members send your details and specifications to us as we are prepared to construct special shapes using band or tee iron reinforcements.

We furnish either 3/16" ribbed glass or 1/4" ribbed wire glass. We strongly recommend the 1/4" ribbed wire glass because it is fireproof and even though badly cracked or broken will not fall from the frame. All glass is cut to size and packed separately.



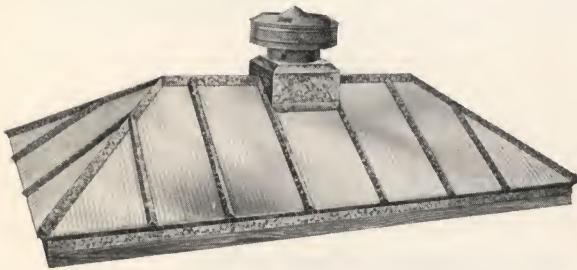
## Willis Hipped Skylight



Style No. 10S

**Style No. 10S.** This is a very popular style where light but no ventilation is required. It is easily adapted to the largest size, with or without reinforcements. A very small amount of curb bracing would be required in the largest sizes.

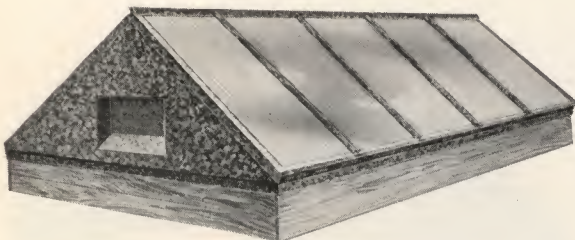
## Willis Hipped Skylight and Ventilator



Style No. 20S

**Style No. 20S.** This is the same skylight as the one shown above with the addition of a ventilator, which is so constructed and set in place that it is absolutely water-tight. Pivoted metal dampers will be included with these ventilators, so hung that normally they will be closed.

## Willis Double Pitch Skylight With Ventilator



Style No. 30S

**Style No. 30S.** The construction of this skylight is of the same general detail as the others. All parts are quickly and easily assembled to make a complete job. The construction of the ventilator in the gable ends is of movable parts to open and close at will. A ventilator can be installed on the ridge same as the style above.

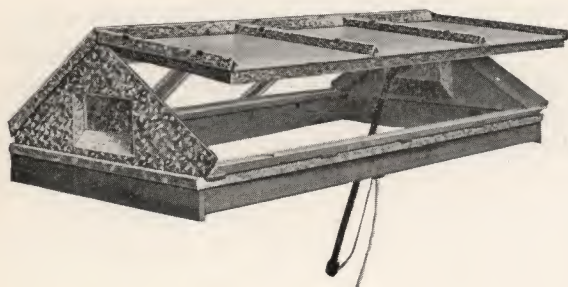
Skylight guards are shown and described on page 14.

List prices will be found on page 10.

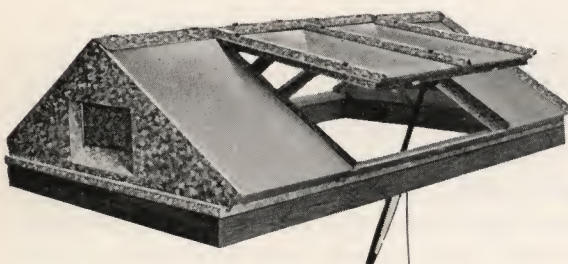




## Skylights



Style No. 35-1S



Style No. 35-1S

**Style No. 35-2S.** This style resembles the No. 35-1S except that all or a portion of each side is hinged at the ridge to open. This skylight gives a maximum of ventilation. A moderate flow of air may be obtained by using the end ventilators only and a large amount of ventilation may be obtained by operating or opening the movable sash.

It is true with this style as well as with the No. 35-1S that all sizes 3'-0" x 5'-0" and larger with exception of size 4'-0" x 4'-0" may have only a section of each side to open. To have permanent satisfaction the entire skylight must be strong and rigid and in order to adhere to these requirements we do not recommend operating large sections.

List prices will be found on page 10. Where the \* appears before the list price it designates sizes on which only a portion or section of each side can be operated.

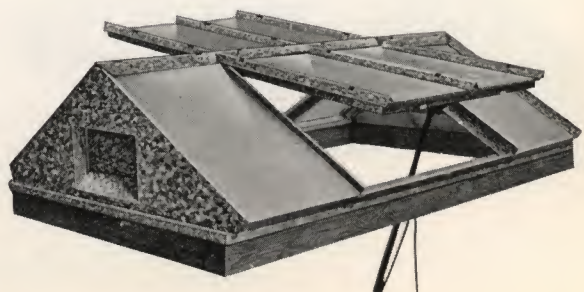
**Style No. 35-1S.** This style is similar to the No. 30-S with exception of the addition of the special feature of movable sash. The hinged portion is raised and lowered by a skylight lifter that may be operated from the floor below. The lifter employed is self-locking.

On all sizes 3'-0" x 5'-0" and larger with the exception of size 4'-0" x 4'-0" it is necessary that we operate a section of the side only. On the larger skylights it is not practical to operate the entire side on account of the lack of rigidity in the large sections while open or while being operated.

List prices will be found on page 10. Where the \* appears before the list price it designates sizes on which only a portion or section of the side can be operated.



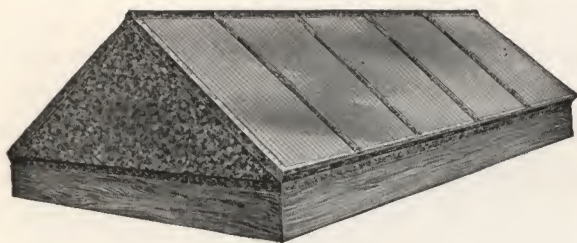
Style No. 35-2S



Style No. 35-2S



## Willis Double Pitch Skylight

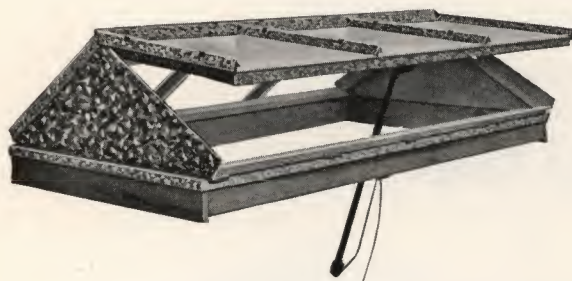


Style No. 40S

Skylight guards are shown on page 14.

**Style No. 40-S.** This style is the same as the No. 30-S except for the omission of the ventilators in the gable ends.

The same general details are followed in this style as in all others. All parts are easily and quickly assembled on the job. This style is used for light only. Ventilation is obtained by placing ventilators on the ridge similar to style No. 20-S. The placing of these ventilators entails special construction and prices will be quoted on application.

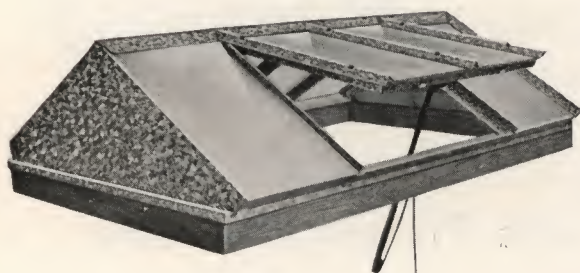


Style No. 45-1S

**No. 45-1S.** This style is identical to the No. 35-1S except for the omission of the ventilators in the ends or gables. The operation of the side sash is the same.

It is true with this style as well as with the No. 35-1S that satisfactory results are not obtained if an attempt is made to hinge or operate large sections. Therefore on all sizes 3'-0"x5'-0" and larger with exception of size 4'-0"x4'-0" we will operate a section only.

List prices will be found on page 10. Where the \* appears before the list prices it designates sizes on which only a portion or section of the side is operated.



Style No. 45-1S

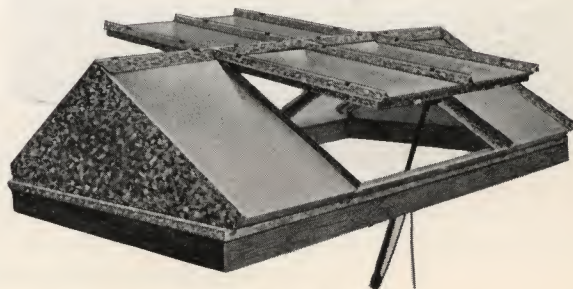


Style No. 45-2S

**No. 45-2S.** This style is identical to the No. 35-2S except for the omission of the ventilators in the ends or gables. The operation of the side sash is the same.

It is true with this style as well as with the No. 35-2S that satisfactory results are not obtained if an attempt is made to hinge or operate large sections. Therefore on all sizes 3'-0"x5'-0" and larger with exception of size 4'-0"x4'-0" we will operate a section only.

List prices will be found on page 10. Where the \* appears before the list prices it designates sizes on which only a portion or section of the side is operated.

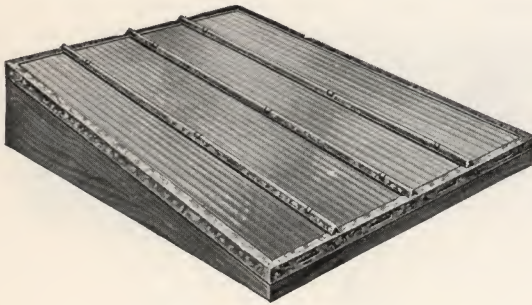


Style No. 45-2S





## Willis Single Pitch Skylight

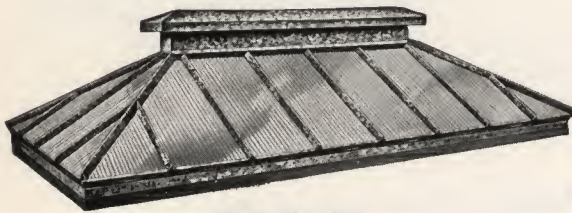


Style No. 50S

**Style No. 50S.** In placing an order for this style it is very important that you specify which measurement will denote the length of glass. If possible send rough pencil sketch.

This style is also used as a continuous skylight for factory building work. When wanted as a scuttle we refer you to Style No. 90S. We can furnish this with hinges attached, but without a lifter and will quote prices on application.

## Willis Hipped Skylight with Ridge Ventilator



Style No. 60S

**Style No. 60S.** This style is the same as Style No. 20S except in the style of ventilator that we provide on the ridge. Whenever the curb for skylight is square we furnish the No. 20S style.

## Willis Hipped Turret Skylight with Pivoted Side Sash



Style No. 70S

**Style No. 70S.** This style has met with such universal favor that we believe it has the very best features that can be combined in a skylight and ventilator.

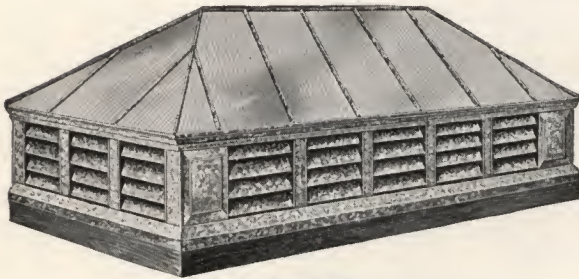
The side sash as we make them are operated in batteries, by a mechanical device of our own, by pulling a chain or cord operating over a pulley. The sash when closed are locked and can be held open at any point. The sash can be made to operate singly if desired.

Skylight guards are shown and described on page 14.

List prices will be found on page 10.



## Willis Hipped Turret Skylight with Stationary Louvre Ventilators



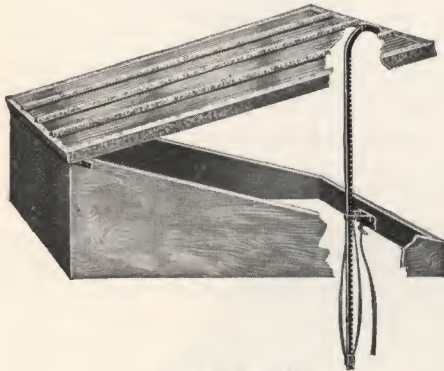
Style No. 80S

**Style No. 80S.** This style is practically the same as the No. 70S, substituting stationary louvres for the pivoted sash. These louvres are backed up with galvanized wire mesh cloth to keep birds out. The construction of the louvres is such as makes them waterproof, excluding rain or snow.

If desired, we can arrange any of the louvred units to solid metal or glass panels.

Skylight Guards are shown on page 14.

## Willis Skylight as Scuttle and Ventilator with Lifter and Hinges



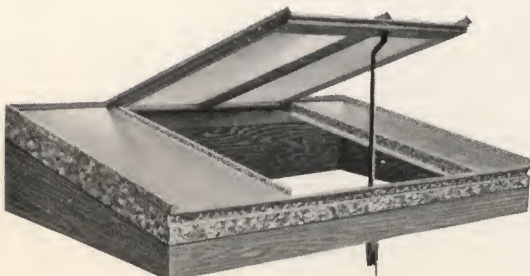
Style No. 90S

**Style No. 90S.** This style is used where light and ventilation is to be combined with minimum of expense. It is the best arrangement when used as a scuttle combining light therewith. It very often is the case that the approach to a scuttle is the darkest place in a building and this arrangement will relieve such a condition.

Whether closed or open the lifter is self-locking and is constructed to operate from the floor.

We do not recommend operating more than 24 square feet with this device.

## Willis Single Pitch Skylight with Part Hinged for Ventilation



Style No. 95S

**Style No. 95S.** This style is quite similar to the Number 90S except that only a portion instead of all of the skylight is to open. The same self-locking raising device is used. We recommend this construction where a large glass area is desired together with ventilation. This style is manufactured in sizes from 4'-0" x 7'-0" to as large as is required. The part which is to open may vary but should not exceed 4'-0" x 6'-0". List prices will be found on page 10 in column headed 90S and 95S and are designated by \*.

List prices will be found on page 10.





## SKYLIGHTS—Continued

## PRICE LIST—All Styles With 3-16 in. Ribbed Glass cut to size and packed in separate crate

Size	10-S	20-S	30-S	35-1S	35-2S	40-S	45-1S	45-2S	50-S	60-S	70-S	80-S	90-S and 95S
2x2	\$16.00	\$20.00	\$15.00	\$25.50	\$33.50	\$14.00	\$24.00	\$32.00	\$10.50	\$20.00	\$44.00	\$36.50	\$17.00
2x3	18.50	22.50	17.50	28.50	37.00	16.00	27.50	35.50	13.00	22.50	50.00	42.00	19.00
2x4	22.00	26.00	20.50	36.50	41.50	19.00	35.00	39.50	15.00	26.00	57.50	48.50	21.50
2x6	29.50	32.00	26.00	40.00	50.00	24.50	38.00	48.00	19.50	32.00	76.00	62.50	28.00
3x3	25.50	30.00	21.50	34.00	42.50	20.00	32.00	41.00	16.00	30.00	61.00	51.50	25.00
3x4	29.25	34.00	25.00	38.50	48.00	23.00	37.00	46.50	18.50	34.00	68.50	58.50	27.50
3x5	34.50	39.00	28.50	*42.50	*52.00	26.50	*40.50	*50.00	21.00	39.00	81.50	68.00	30.50
3x6	38.00	42.00	32.50	*46.00	*56.00	30.50	*54.00	*64.00	24.00	42.00	89.00	75.00	34.00
3x8	44.50	53.00	40.00	*54.00	*63.50	38.00	*52.00	*61.00	29.50	55.00	103.50	89.50	40.00
4x4	34.50	39.00	30.00	44.00	54.00	27.50	42.00	52.00	23.00	39.00	80.00	67.50	32.00
4x5	38.00	42.00	34.00	*48.00	*57.50	32.00	*46.00	*55.50	26.00	42.00	89.50	74.00	36.00
4x6	43.50	48.00	39.00	*52.50	*62.50	36.50	*50.50	*60.00	29.50	48.00	99.50	83.50	40.00
4x7	49.00	53.50	43.00	*57.00	*66.50	40.50	*54.50	*64.00	34.00	53.50	110.00	93.00	*42.50
4x8	53.00	61.50	48.00	*62.00	*72.00	45.50	*59.50	*69.00	37.50	61.50	120.00	101.50	*47.00
4x10	63.50	72.00	58.00	*72.00	*82.00	55.00	*69.00	*78.50	45.50	72.00	141.00	120.00	*53.00
5x5	41.00	45.50	40.00	*54.00	*64.00	37.50	*52.00	*61.50	30.50	45.50	100.00	81.50	41.00
5x6	46.00	50.50	45.00	*59.00	*69.00	42.00	*56.50	*66.00	34.50	50.50	109.00	90.00	*44.00
5x8	57.00	65.50	55.00	*69.00	*79.00	52.00	*66.00	*76.00	43.50	65.50	130.00	109.00	*55.00
5x10	68.50	77.00	67.00	*81.50	*91.50	63.50	*78.00	*88.00	53.50	77.00	152.50	128.00	*66.50
5x12	82.50	91.50	80.50	*95.00	*105.00	76.50	*91.00	*101.00	63.50	91.50	175.00	148.00	*78.00
6x6	52.00	56.50	51.50	*67.50	*78.00	49.00	*65.00	*75.00	40.00	56.50	119.00	100.00	*54.00
6x8	65.00	72.00	64.00	*79.50	*87.00	61.00	*76.50	*84.00	50.00	72.00	140.00	120.00	*63.00
6x10	79.50	86.00	78.00	*93.50	*104.00	74.50	*90.00	*100.50	62.00	86.00	163.50	141.00	*76.00
6x12	96.00	105.00	94.00	*109.50	*120.00	90.00	*105.50	*116.00	74.00	100.00	183.50	159.00	*89.50
6x14	113.00	122.00	111.00	*126.50	*137.00	106.50	*122.00	*132.50	89.00	122.00	217.50	188.50	*106.00
8x8	87.00	94.00	85.00	*104.50	*116.50	81.50	*101.00	*113.00	64.00	94.00	170.00	148.00	*79.00
8x10	107.00	114.00	101.50	*121.00	*133.50	97.50	*117.00	*129.00	79.00	114.00	199.50	175.00	*95.00
8x12	127.00	137.00	126.00	*145.50	*158.00	121.00	*141.00	*153.00	94.50	137.00	228.00	202.00	*113.00
8x14	143.00	152.00	140.50	*159.50	*171.50	135.00	*154.00	*166.50	111.00	152.00	257.50	228.00	*131.50
8x16	160.00	174.00	161.00	*180.50	*192.50	155.00	*174.50	*186.50	126.00	174.00	284.00	249.50	*148.00
10x10	130.00	140.00	131.00	*152.50	*165.00	126.00	*147.50	*160.00	97.50	140.00	234.50	205.00	*116.00
10x12	156.00	166.00	150.00	*171.50	*183.50	144.00	*165.50	*178.00	114.50	166.00	270.50	239.50	*135.00
10x14	179.00	191.50	173.00	*194.50	*207.00	167.00	*188.00	*200.00	134.50	191.50	304.50	270.00	*157.50
10x16	202.00	216.00	196.50	*218.00	*230.00	190.00	*211.50	*224.00	153.50	216.00	335.00	300.00	*176.00
10x18	226.00	246.00	221.00	*242.50	*255.00	215.00	*236.00	*248.00	177.50	246.00	367.50	331.00	*200.00
10x20	249.00	274.00	244.00	*265.50	*278.00	238.00	*259.00	*271.50	196.00	274.00	400.00	361.50	*220.00

## With 1-4 in. Ribbed Wire Glass cut to size and packed in separate crate

Size	10-S	20-S	30-S	35-1S	35-2S	40-S	45-1S	45-2S	50-S	60-S	70-S	80-S	90-S and 95S
2x2	\$17.00	\$21.00	\$16.00	\$26.50	\$34.00	\$14.50	\$25.00	\$33.00	\$11.00	\$21.00	\$45.00	\$37.50	\$18.00
2x3	20.00	24.00	19.00	30.00	38.50	17.50	29.00	37.00	14.00	24.00	52.50	43.50	20.00
2x4	24.50	29.00	22.50	34.50	43.50	20.50	33.00	41.50	16.50	29.00	61.50	51.00	23.00
2x6	33.50	36.00	29.00	43.00	53.00	27.00	41.00	51.00	22.00	36.00	82.00	66.50	30.00
3x3	29.00	33.00	23.50	36.00	44.50	22.00	34.00	43.00	18.00	33.00	66.00	55.00	25.00
3x4	33.50	38.00	28.00	41.50	51.00	26.00	39.50	49.00	21.00	38.00	75.00	63.00	30.00
3x5	40.50	45.00	32.00	*46.00	*55.50	30.00	*44.00	*53.50	24.00	45.00	89.50	74.00	33.50
3x6	45.00	49.50	36.50	*50.00	*60.00	34.50	*48.00	*58.00	28.00	49.50	98.50	82.00	37.50
3x8	51.50	60.00	46.00	*59.50	*69.00	44.00	*57.50	*66.50	34.00	60.00	116.00	96.50	44.50
4x4	40.50	45.00	34.00	47.50	57.50	31.50	55.50	55.50	26.00	45.00	88.50	73.50	35.00
4x5	44.50	47.00	39.00	*53.00	*62.50	36.50	*51.00	*60.50	30.00	47.00	98.50	81.00	40.00
4x6	51.00	55.50	44.00	*58.00	*68.00	42.00	*56.00	*65.50	34.00	55.50	110.00	91.00	44.50
4x7	58.00	62.50	49.50	*63.50	*73.00	47.00	*61.00	*70.50	39.50	62.50	122.50	102.00	*48.00
4x8	63.00	71.50	55.50	*69.50	*79.50	53.00	*67.00	*76.50	43.50	71.50	134.00	111.50	*53.00
4x10	75.50	84.00	67.50	*81.50	*91.50	64.50	*78.50	*88.00	53.50	84.00	157.50	132.50	*65.00
5x5	47.00	51.50	45.50	*59.50	*69.50	43.00	*57.50	*67.00	35.50	51.50	108.00	87.50	45.50
5x6	53.50	58.00	52.00	*66.00	*76.00	49.00	*63.50	*73.00	40.00	58.00	120.00	98.00	*50.00
5x8	67.00	75.50	64.00	*78.00	*88.00	61.00	*75.00	*85.00	51.00	75.50	144.00	119.00	*63.00
5x10	80.50	89.00	78.50	*93.00	*103.00	75.00	*89.50	*99.50	63.00	89.00	169.50	140.00	*76.00
5x12	97.00	106.00	94.50	*109.00	*119.00	90.50	*105.00	*115.00	75.50	106.00	195.00	163.50	*90.00
6x6	60.50	65.00	60.00	*74.50	*85.00	57.50	*72.00	*82.00	47.00	65.00	131.50	109.00	*58.50
6x8	76.00	83.00	75.00	*90.50	*98.00	72.00	*87.50	*95.00	59.50	83.00	155.50	131.50	*72.00
6x10	93.50	100.00	92.00	*107.50	*118.00	88.50	*104.00	*114.50	73.50	100.00	183.00	155.00	*87.50
6x12	113.50	122.50	110.50	*126.00	*136.50	106.50	*122.00	*132.50	88.00	115.00	205.00	174.00	*103.50
6x14	132.50	141.50	130.50	*146.00	*156.50	126.00	*141.50	*152.00	105.50	141.50	244.00	208.00	*123.00
8x8	102.00	109.00	100.50	*120.00	*132.00	97.00	*116.00	*128.00	76.50	109.00	191.00	163.50	*91.50
8x10	127.00	134.00	120.00	*139.50	*152.00	116.00	*135.50	*147.50	95.00	134.00	226.00	195.00	*111.00
8x12	150.00	160.00	151.00	*170.00	*182.50	146.00	*165.50	*177.50	113.50	160.00	258.50	225.00	*132.00
8x14	167.00	176.00	166.00	*185.00	*197.50	160.50	*180.00	*192.00	133.50	176.00	289.50	252.00	*154.00
8x16	186.50	200.00	190.50	*210.00	*222.00	184.50	*204.00	*216.00	151.00	200.00	320.00	276.00	*173.50
10x10	153.00	163.00	156.00	*177.00	*189.50	151.00	*172.00	*184.50	117.00	163.00	264.50	228.00	*136.00
10x12	184.00	194.00	178.00	*199.50	*211.50	172.00	*193.50	*206.00	138.50	194.00	306.50	267.50	*160.00
10x14	211.50	224.00	206.00	*227.00	*239.50	200.00	*220.00	*232.00	163.00	224.00	345.50	303.00	*185.50
10x16	239.00	253.00	234.00	*255.00	*267.50	227.50	*249.00	*261.50	185.00	253.00	381.50	337.00	*207.50
10x18	268.00	288.00	263.00	*284.50	*297.00	257.00	*278.00	*290.00	214.00	288.00	419.50	373.00	*237.50
10x20	295.00	320.00	290.00	*312.00	*324.50	284.00	*305.50	*318.00	235.00	320.00	456.00	407.50	*260.00

We are always glad to quote on special requirements or sizes and will submit details and drawings for consideration and approval. Skylights are built to any size curb measurements. Intermediate sizes take next higher list price.





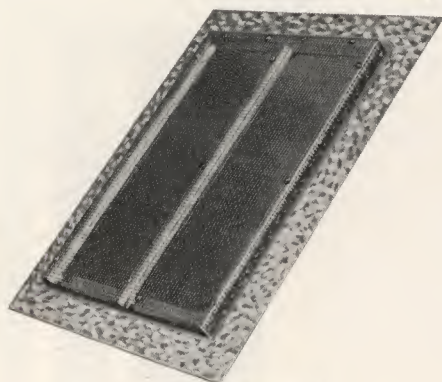
# Willis Hoghouse Skylights

EASY TO INSTALL—GIVE PERFECT SATISFACTION

Willis Hoghouse Skylights have many good features, gained from thirty years' experience in the manufacturing of high grade Skylights for every purpose. These Skylights have the largest possible glass area. They are perfectly watertight without the use of putty. They have a condensation gutter to carry off the moisture that collects on the glass. Glass is protected by heavy galvanized, small mesh netting. Designed so that very little work is required to install them, either in new or old buildings. They are true Willis quality throughout and fully guaranteed to meet your utmost expectations of a perfect Skylight for this use.

## Style No. 71S

WITH ROOF FLANGE

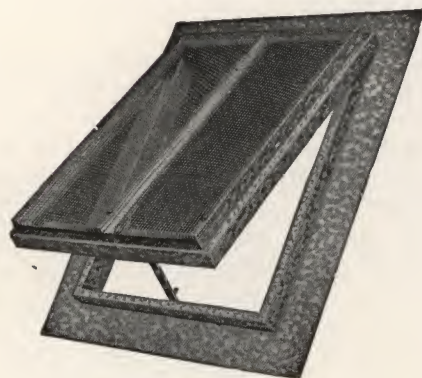


Style No. 71S

A very satisfactory Skylight where plenty of light, but no ventilation, is wanted. Low in cost and easy to set in place. Has flange over which roofing or shingles are laid, making it entirely weather-proof. Standard size, 2 light, 10 in. x 28 in. We also manufacture this style in 2 light, 10 in. x 30 in. or 2 light, 10 in. x 36 in.

## Style No. 74S

VENTILATING—WITH METAL CURB AND ROOF FLANGE



Style No. 74S

The acme of perfection in modern Hoghouse Skylights. Every requirement for a perfect Hoghouse Skylight is in this style, has opening device for ventilating purposes. It is hinged to a complete metal curb, which has roof flange and is installed in the same manner as Style No. 71S. This style of Skylight is without an equal, and is proving to be exceptionally popular.

Standard size, 2 light, 10 in. x 28 in. We also manufacture this style in 2 light, 10 in. x 30 in. or 2 light, 10 in. x 36 in.

### LIST PRICES—NOT INCLUDING GLASS

Prices Complete With Glass—Quoted Only on Application

SIZES	Style 71S	Style 74S
2 light 10 in. x 28 in. Each.....	\$5.00	\$ 9.00
2 light 10 in. x 30 in. Each.....	5.50	9.75
2 light 10 in. x 36 in. Each.....	6.60	11.70

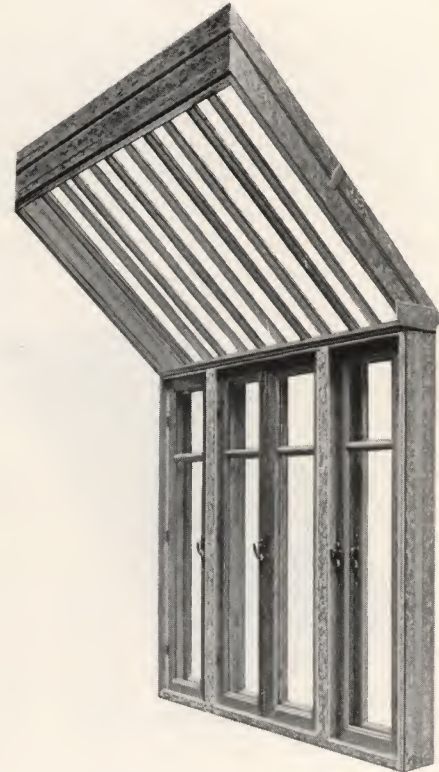
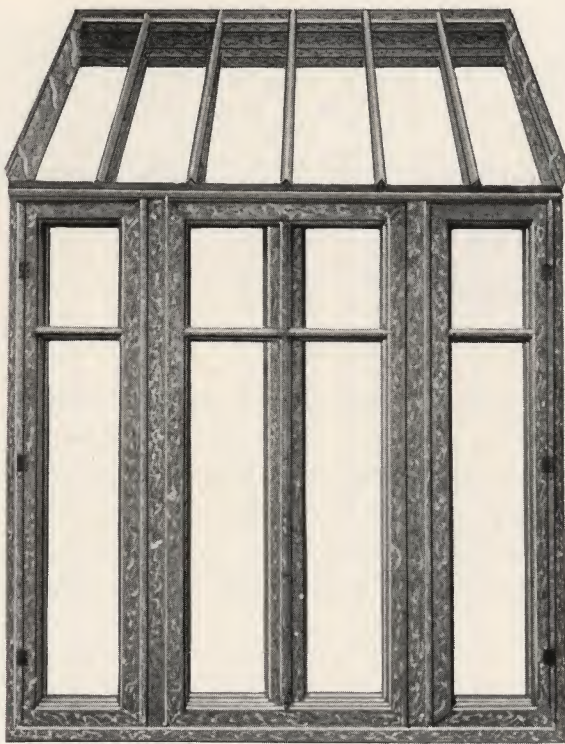
Unless otherwise specified the standard size, 2 light 10 in. x 28 in. will be shipped

FOR WILLIS FARM BUILDING VENTILATORS, WE REFER YOU TO STYLES NO. 270, NO. 264 AND No. 275  
PAGE 21; STYLES NO. 100, AND 99 SHOWN ON PAGE 22; ALSO STYLE NO. 290 ON PAGE 23.





## Special Skylight Construction



The illustrations on this page will give our customers an idea of special construction that we are prepared to manufacture.

The two illustrations at the top show a combination double casement hollow metal window with a double skylight, over. This makes an ideal construction for operating rooms where light is necessary but where dust and weather must be kept out.

The illustration at the lower part of the page shows typical saw-tooth construction. Note in the illustration that alternating sections open. This gives not only light but ventilation. If light only is required the sections shown to operate can be made stationary. This construction, the same as all other skylights, we manufacture, is guaranteed water tight.

We welcome the opportunity to work out special construction and are pleased to have our customers submit their problems to us.





## Glass

### DESCRIPTION

Plain ribbed glass, without wire mesh embedded in its center, is the least expensive glass made and is used in skylights when it is desirable to save expense, it cannot be used in metal windows because it is not fire proof and therefore will not secure a lower insurance rate.

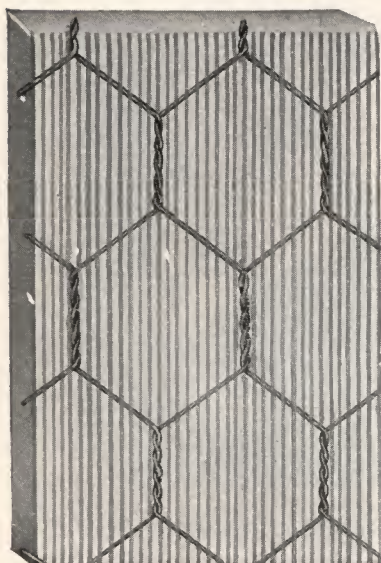
Wired glass is manufactured and described as Polished Wire, Maze Wire, Rough Wire and Ribbed Wire, all  $\frac{1}{4}$  in. thick, having wire netting embedded in its center during the process of manufacture. Set in approved hollow metal window sash it is a most efficient fire retardant, permitting the blaze to declare itself. Its parts are visible, accesible, cleanable and the fire fighter is not handicapped by hidden or rusty fastenings nor blistering paint. Wire glass will crack from a shock or by the action of intense heat, but remains practically intact retaining its place in the sash and the perils incident to falling glass and the ingress or egress of draft and flame are avoided. In our work we find the general run of orders are for the ribbed wire glass in both windows and skylights for the reason that it gives all the desired protection at the least possible expense. Make your specifications plain as glass constitutes an important part of the quotations.

Glass to be of an approved make complying with the rules of the National Board of Fire Underwriters must be at least  $\frac{1}{4}$  in. thick at the thinnest point, wire mesh to be not larger than  $\frac{7}{8}$  in. and No. 24 B & S. gauge, the plane of the wire mesh to be practically midway between the two surfaces and have an actual bearing in the grooves at least  $\frac{5}{8}$  in. at all points. The putty joint should be made in such a manner as to prevent water from remaining in contact with the metal.

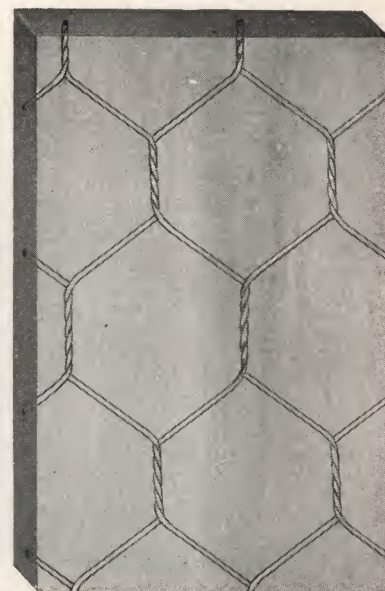
We strongly recommend the use of Ribbed wire glass in all skylight work.

Also that the manufacturer be required to furnish the glass cut to size for both the metal windows and skylights. This insures that it will be of the proper size as required.

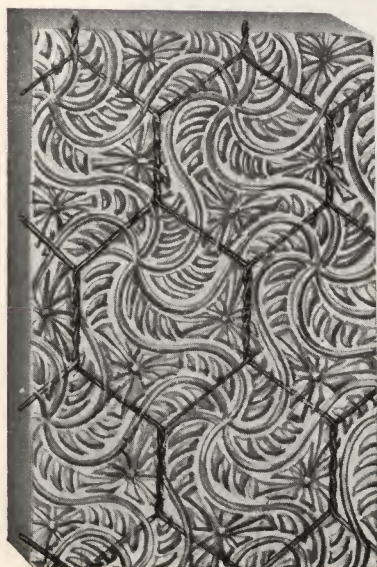
**ALL GLASS IS CUT TO SIZE AND  
PACKED IN SEPARATE CRATE.**



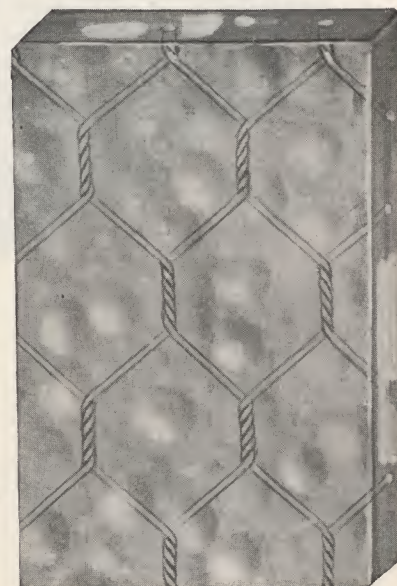
Ribbed "Wire Glass"



Polished "Wire Glass"



Maze "Wire Glass"

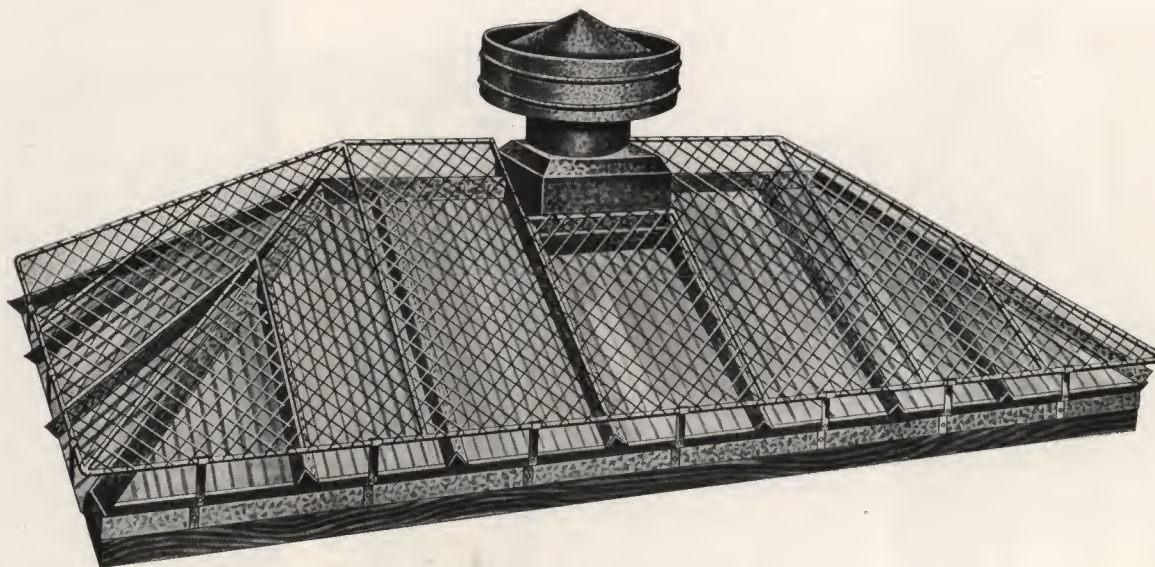


Rough "Wire Glass"





## Wire Skylight Guards

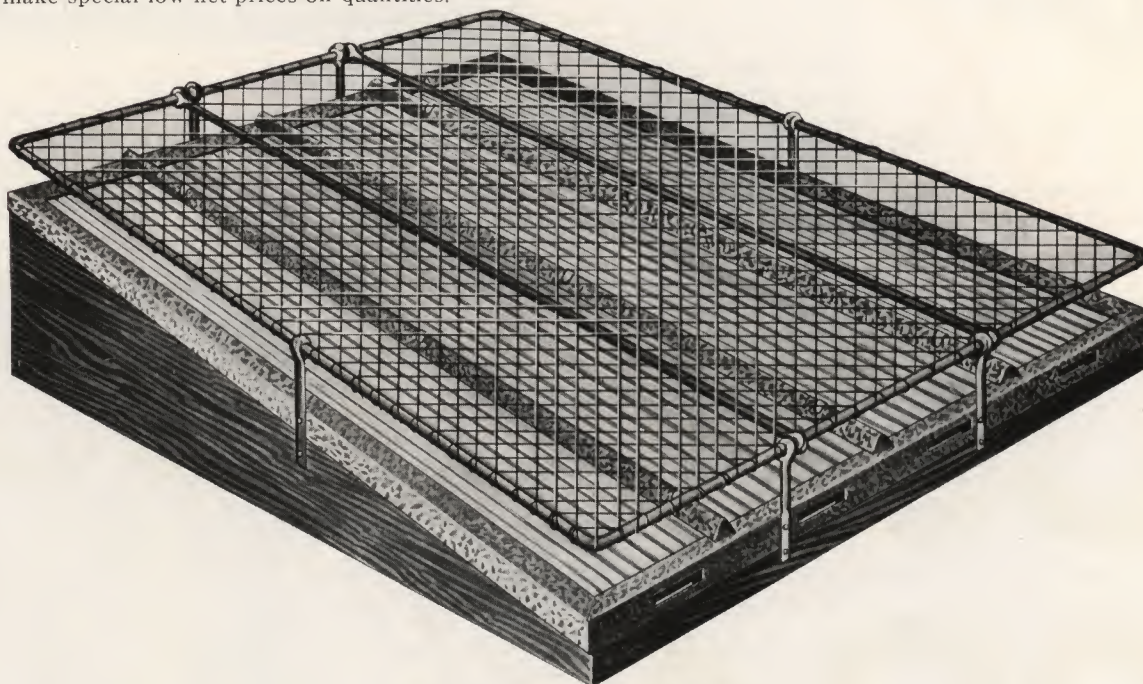


No. 1306. Wire Skylight Guards

- |       |   |   |
|-------|---|---|
| 1     | inch mesh, No. 13 wire, round iron frame..... | } |
| 1     | inch mesh, No. 12 wire, round iron frame..... |   |
| 1 1/4 | inch mesh, No. 12 wire, round iron frame..... |   |
| 1 1/4 | inch mesh, No. 11 wire, round iron frame..... |   |

Prices quoted on application.

Made with Iron Standards raised up from glass same as No. 1307.  
We make special low net prices on quantities.



No. 1307. Wire Skylight Guards

- |       |   |   |
|-------|---|---|
| 1     | inch mesh, No. 13 wire, round iron frame..... | } |
| 1     | inch mesh, No. 12 wire, round iron frame..... |   |
| 1 1/4 | inch mesh, No. 12 wire, round iron frame..... |   |
| 1 1/4 | inch mesh, No. 11 wire, round iron frame..... |   |

Prices quoted on application.

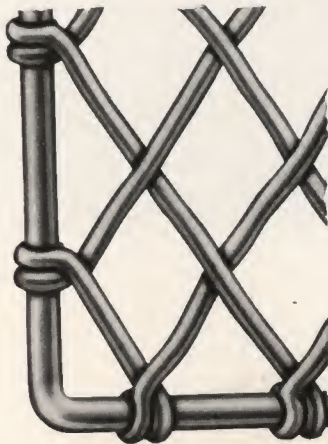
Made with Iron Standards to raise the guards up from the glass as shown above, so as to allow cleaning of the glass without removing the Wire Guards. Painted any desired color, usually drab or made of Galvanized Wire. We can furnish a guard for any of our styles of Skylights except those styles which have movable or hinged sections.



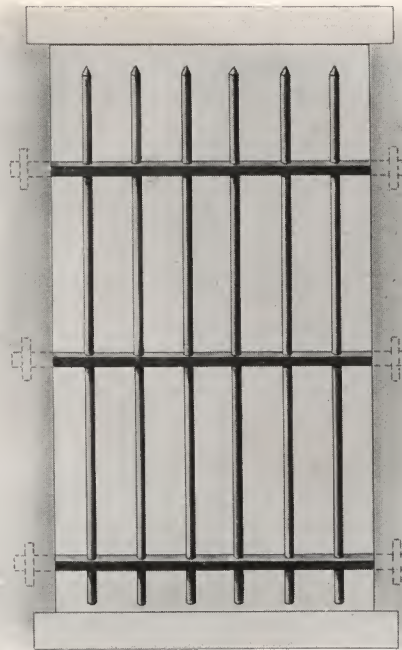
## Window Guards



No. 1309. Details of Wire Guard Made with Channel Iron Frame

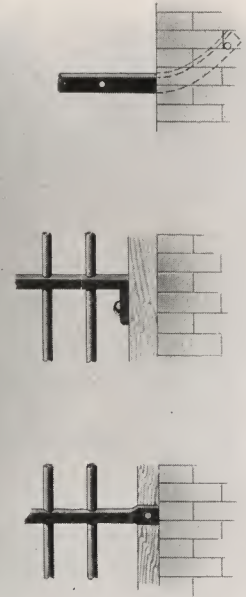


No. 1308. Detail of Guard Made with Round Rod Frame



No. 1310. Detail of Heavy Round Bar Construction

Window guards can be furnished in any of the three styles illustrated. In ordering careful consideration must be given to measurements. Give the width first and the height second. Also state the nature of the material of which the wall is constructed, whether brick, stone or wood. When style No. 1310 is required state which of the three methods of installation is to be used. These three methods are illustrated in the cut showing this style. Prices on application.



# DG8

Style No. 1252 (built-up galvanized)

# OR4

Style No. 1253 (built-up galvanized)

# AB5

Style No. 1254 (built-up galvanized)

List Prices Nos. 1252, 1253, 1254

3 inch. Each.....	\$1.50	10 inch. Each.....	\$2.20
4 inch. Each.....	1.50	12 inch. Each.....	2.30
5 inch. Each.....	1.80	14 inch. Each.....	2.40
6 inch. Each.....	1.80	16 inch. Each.....	2.60
8 inch. Each.....	2.00	18 inch. Each.....	2.90

Letters are furnished individually or loose or we will mount them on panels. When panels are required state clearly the wording and furnish a sketch of the style of back desired. A charge will be made for panel and mounting. Prices on this work will depend upon the size, number of letters and style of panel. We will quote on application.





## Marquise



The use of the Sheet Metal Marquise carried on a wood or structural steel frame supported by rods or chains is becoming very popular.

We have many designs for our customers to select from. In addition our drafting department is available at all times to aid in working out the individual ideas of our customers. You will find illustrated on these pages marquise we have constructed. These illustrations are shown to offer suggestions.





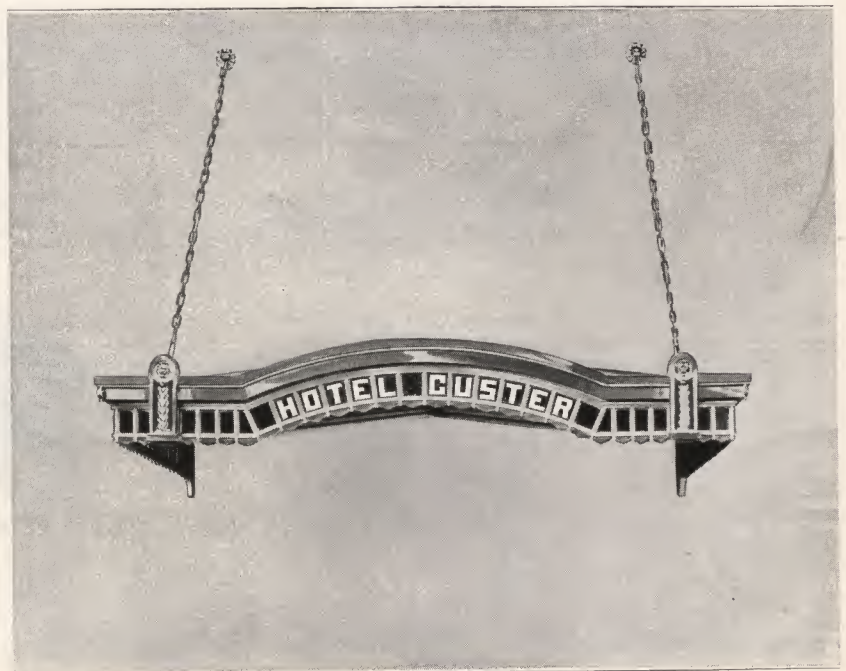
## Marquise



There is almost nothing that will make the front of a business building or theatre more attractive and draw more people to it than a well designed Marquise.

Made of galvanized sheet metal or copper, wonderful results are being obtained and when made of either of these materials the Marquise are comparatively light in weight.

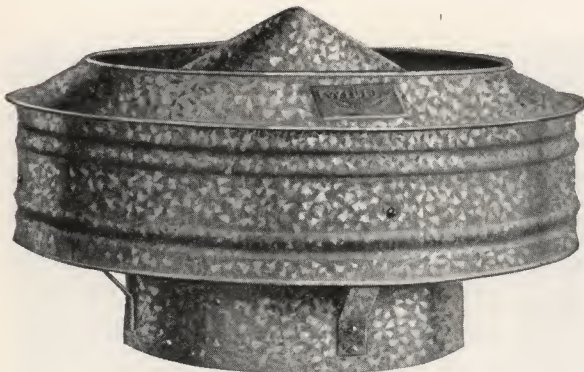
Skylights may be used in the roof which will enable light to pass through. Roofs may be made solid, covered with a tin deck and ceiled underneath with a steel ceiling of an attractive design.







## Willis Ventilators



Style No. 125

Fresh air in all types of structures has been found to be an absolute necessity. In order to protect the health of employees and to enable them to put forth their best efforts pure air is necessary. Employers have come to realize this fact. Theaters, hotels, all buildings used for public gatherings, and even homes must have provision for a supply of fresh air, otherwise those occupying them endanger their health. This supply of fresh air must be supplied without a decided lowering of the temperature. This can and is being accomplished by the use of Willis Ventilators.

During the years that we have been manufacturing ventilators, we have been constantly experimenting and studying problems of ventilation. We believe, that as a result of these experiments and study, we have produced a ventilator which will give perfect results.

The cost of installing Willis Ventilators is moderate. After they are installed there is no upkeep. No movable parts to become deranged or to wear out. We firmly believe the stationary type to be most practical and satisfactory.

Our ventilators are constructed so that any movement of air across the top will cause an upward flow from the rooms below through the ventilator. There are no down-drafts from the Willis Ventilators. The caps are screened with heavy galvanized cloth to prevent the entrance and nesting of birds.

All ventilators are made of galvanized open hearth steel in gauges suitable to the size.

Illustrations of various types of bases will be found on page 20.

List prices on Ventilator Caps and Bases will be found on page 19.



Section Style No. 125



## The Willis Ventilator

This style ventilator transmits light as well as ventilation and will therefore more completely answer some requirements.

The construction employed is generally that used in the Style No. 125 except that  $\frac{1}{4}$ " ribbed wire glass is used in the roof in place of metal.

The same thought and care is used in the designing and construction of this style as in the No. 125. A steady flow of air is maintained, no down drafts or leaking.

List prices are shown below.

Illustrations of various types of bases will be found on page 20.



Style No. 126



Section

Style No. 126

## List Price for Ventilator Caps and Bases

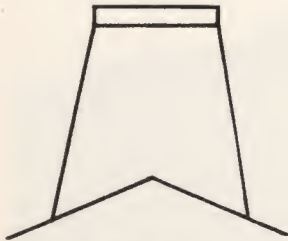
Neck Diameter	Style No. 125	Style No. 126	Bases	Bases
			A B C & D	E F & G
6-inch.....	\$ 3.00	On Application Glass is $\frac{1}{4}$ in. Ribbed Wire	\$ 2.00	\$ 2.50
7-inch.....	3.50		2.00	2.50
8-inch.....	3.50		2.00	2.50
9-inch.....	4.00		2.00	3.00
10-inch.....	4.50		2.00	3.00
12-inch.....	4.50	\$ 7.00	2.50	3.50
14-inch.....	5.50	10.30	2.50	4.00
16-inch.....	6.75	12.35	3.50	5.25
18-inch.....	8.90	13.65	5.25	6.25
20-inch.....	9.30	16.45	5.75	7.50
24-inch.....	13.50	20.00	6.00	8.25
28-inch.....	19.60	28.00	7.50	9.50
30-inch.....	24.30	33.50	8.50	10.50
34-inch.....	27.75	42.00	10.00	12.00
36-inch.....	28.00	45.50	10.50	13.00
40-inch.....	38.00	66.75	12.00	14.50
48-inch.....	52.00	78.75	16.00	20.00
60-inch.....	91.00	118.00	25.00	30.00
72-inch.....	118.00	156.00	30.00	40.00

List prices do not include dampers. For Dampers sizes 6" to 12" inclusive add \$1.00 to list prices, sizes 14" to 24" inclusive add \$2.00 to list prices, sizes 28" to 40" inclusive add \$3.00 to list prices and sizes 48" to 72" inclusive add \$5.00 to list prices.

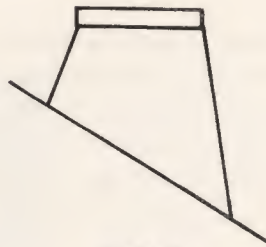




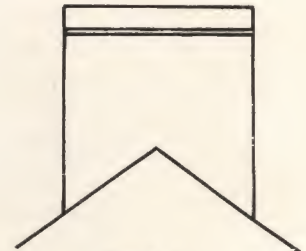
## Ventilator Bases



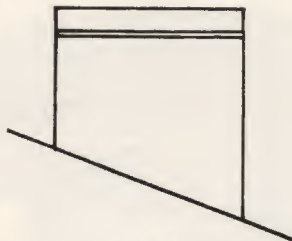
Style A



Style B



Style C



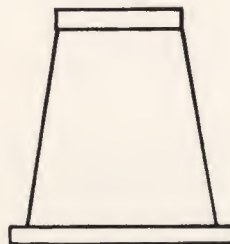
Style D



Style E



Style F



Style G

The above are various styles of standard bases, used with Willis Ventilators. These may be used with either style No. 125 or No. 126.

While we believe that our customers will find illustrated above a base for every requirement yet should the conditions at your building require something different, let us know the conditions surrounding your requirement, and we will work out a design which will answer this purpose.

In ordering be sure to give the pitch of the roof as well as the style of base required. This will save a loss of time in writing for necessary information.

List prices will be found on page 19.



## Willis Farm Building Ventilators



Style No. 270

For use on such buildings as hog-houses, dairy buildings, and chicken houses, we have designed the styles illustrated on this page.

Style number 270 is the standard Willis cap mounted on a typical base. This style has proven to be a favorite for the reason that it is moderate in price and at the same time gives excellent results. This style you will note does not have a vane.

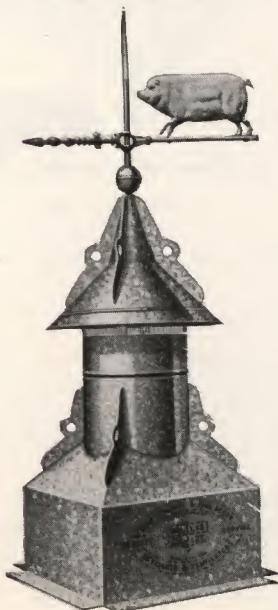


Style No. 264

Many times users desire to add to the general appearance of their buildings by using ventilator with vanes. This type is illustrated by the style number 264. On page 22 you will note the six ornaments we are in position to furnish. In ordering this style, specify number 264 and mention the vane desired such as automobile, sheep, rooster, cow, horse or pig.

These vanes are made of zinc, are about 1 inch in thickness, 9 inches high and 15 inches long. They are so carefully mounted that the head of the animal will be kept pointed into the wind by the slightest breeze.

Bases are cut to fit the pitch of roof on which they are to be placed. Specify clearly the style of the ventilator by its number and give the pitch of the roof. Should you intend placing the ventilator at some point on the roof other than the ridge, a pencil sketch will prove the best means of giving us the complete information required.



Style No. 275

Galvanized wire mesh is used to screen the ventilators to prevent the entrance and nesting of birds.

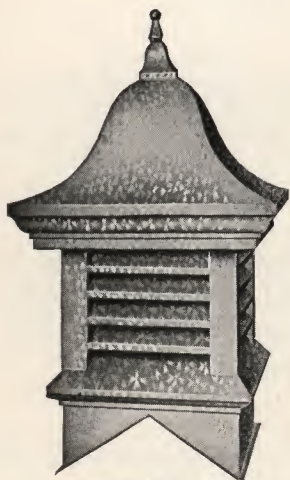
The style number 275 is the most inexpensive ventilator we manufacture. While this style does not have all the features of the other ventilators, yet it will be found very efficient. It will give excellent results for a very small investment. While the illustration shows the hog vane, any of the six smaller ornaments shown on page 22 may be used. This style is made in two sizes only, 12 inch and 16 inch diameter.

List price will be found on page 24.





## Willis Louvred Ventilators



Style No. 100



Style No. 78



Style No. 79

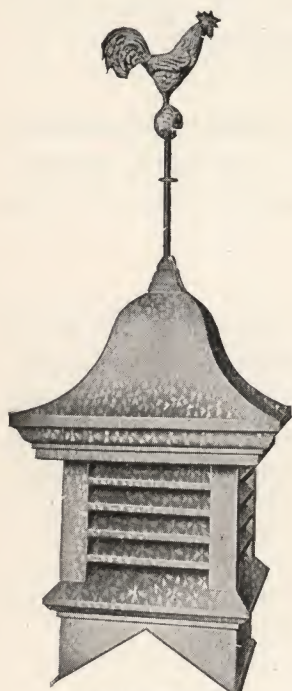


Style No. 181

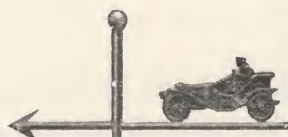


Style No. 182

The above vanes are all full bodied, being approximately 6 in. through by 16 in. high by 30 in. long.



Style No. 99



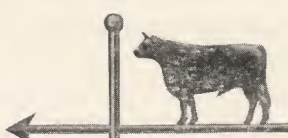
Style No. 175



Style No. 176



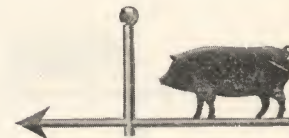
Style No. 177



Style No. 178



Style No. 179



Style No. 180

These vanes are smaller in sizes, being approximately 1 in. through by 9 in. high by 15 in. long.

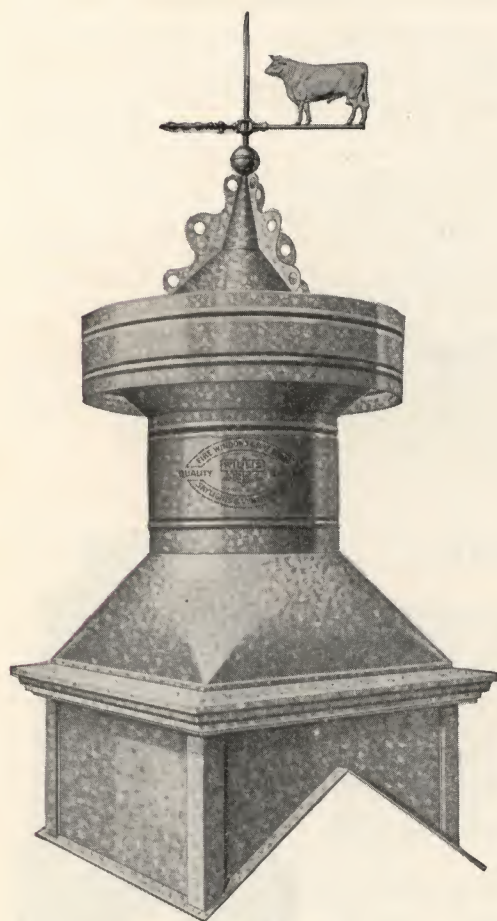
As shown these ventilators are used on barns, warehouses and buildings of a similar character. The louvred section is backed up with galvanized wire mesh to exclude birds. The construction of the louvres make them storm proof. The only wood work necessary in the erection is the securing of posts in the corners to support them in case of a wind storm. The vanes are so nicely balanced that they move in the slightest breeze to keep the head of animal faced into the wind.

The vanes shown separately to the right on this page alternate with the vane shown on Style No. 99. In ordering or requesting quotation specify the vane wanted and give the size of ventilator. When ventilator is wanted without vane, we refer you to Style No. 100 above. In ordering Ventilators always give pitch of roof that we may make bases to fit.

List prices on styles No. 99 and No. 100 will be found on page 24.



## Willis Cupalos



Style No. 290

### Maximum in Efficiency

Willis Cupalos are made with our Standard Ventilator Cap. Their construction is simple and on entirely scientific principles. They give a constant exhaust of foul air and are bird-proof, storm-proof and do not permit down drafts. Nothing to get out of order. Made in all sizes to fit any pitch of roof.

Any of the Standard Vanes shown on page 22 can be furnished.

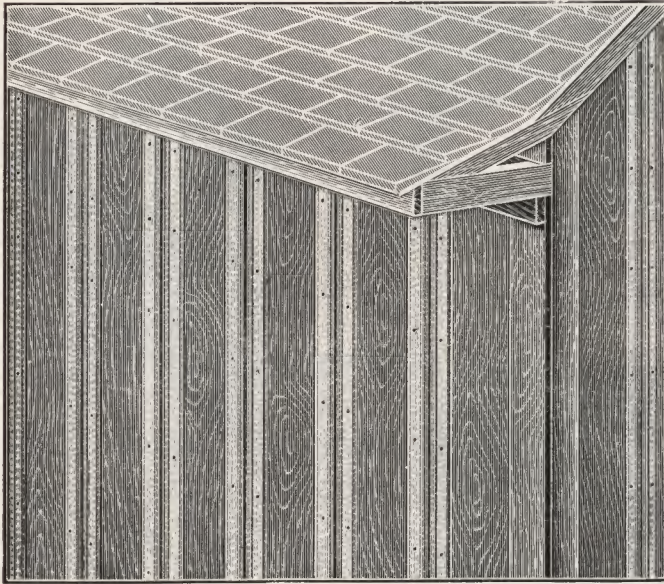
### List Prices

16 inch neck.....	\$ 35.00
20 inch neck.....	43.00
24 inch neck.....	48.00
30 inch neck.....	60.00
36 inch neck.....	76.00
40 inch neck.....	80.00
44 inch neck.....	90.00
48 inch neck.....	100.00





## Willis Galvanized Metal Batten Strips



A neat, economical method of construction for farm and other buildings. WILLIS GALVANIZED METAL BATTEN STRIPS trim the building, make it weather resisting, rat proof, and above all they are economical to use. Easy to cut and give no waste.

The useful life of buildings equipped with these metal battens is much greater than those equipped with wood battens.

They are rapidly taking the place of the old style of wood batten strip.

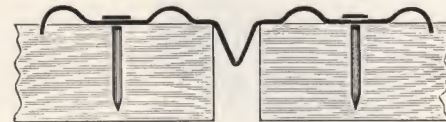
Made of the best quality galvanized iron in lengths of 6, 7, 8, 9 and 10 feet.

They lay close to the boards and do not offer obstructions to sliding doors. Cannot be torn off by wagon hubs like the old style of wooden batten. They expand as the boards shrink so that nails do not pull out. They will not split or draw away from the boards.

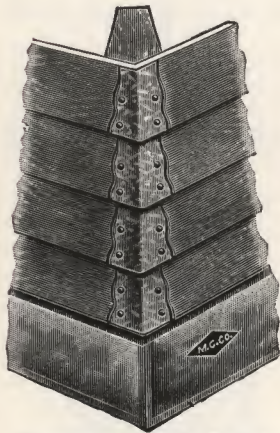
The Willis Metal Battens are valuable for lining grain bins and wagon boxes.

LIST PRICE, \$36.00 PER THOUSAND FEET

Shipping Weight, 185 lbs. per thousand feet.



## Metal Building Corners



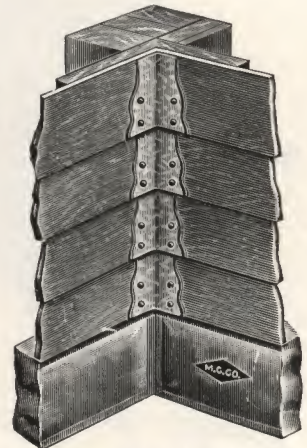
Showing Outside Corner Applied

"WILLIS" Metal Corners are being extensively used and take the place of Corner boards and finish the corner of the building when weatherboard or lap siding is used. They save the time and expense of mitreing and their appearance is superior to wood corner board.

### List Prices Per 1000

Shipping Wt.  
Galvanized. Per 1000.

No. 4—3½ in. long, weather board laid 3 in. to weather .....	\$24.00	80 lbs.
No. 6—4½ in. long, weather board laid 4 in. to weather .....	25.00	100 lbs.
No. 8—5½ in. long, weather board laid 5 in. to weather .....	28.00	120 lbs.



Showing Inside Corner Applied

### LIST PRICES ON VENTILATORS

Illustrated on pages 21 and 22.

Style No. 275

Neck Diameter	Base	Height	List Price
12 in.	20 in. x 20 in.	5 ft. 0 in.	\$12.00
16 in.	24 in. x 24 in.	6 ft. 0 in.	\$16.00

	Style No. 100	Style No. 100 With Vane Nos. 78, 79, 181 or 182	Style No. 99 With Vane Nos. 175, 176, 177, 178, 179 or 180
2 ft. 0 in. x 2 ft. 0 in. ....	\$56.00	\$88.00	\$72.00
2 ft. 6 in. x 2 ft. 6 in. ....	64.00	100.00	80.00
3 ft. 0 in. x 3 ft. 0 in. ....	80.00	116.00	96.00
3 ft. 6 in. x 3 ft. 6 in. ....	88.00	124.00	104.00
4 ft. 0 in. x 4 ft. 0 in. ....	96.00	132.00	112.00
4 ft. 6 in. x 4 ft. 6 in. ....	104.00	140.00	120.00
5 ft. 0 in. x 5 ft. 0 in. ....	112.00	148.00	128.00

Neck Diameter	Style No. 270	Style Nos. 264, with Vanes Nos. 175, 176, 177, 178, 179 or 180
16-inch .....	\$14.00	\$19.00
18-inch .....	17.00	22.00
20-inch .....	20.00	25.00
24-inch .....	25.00	30.00
28-inch .....	34.00	39.00
30-inch .....	37.50	42.50
36-inch .....	52.00	57.00
40-inch .....	68.00	73.00
44-inch .....	76.00	81.00
48-inch .....	80.00	85.00





## Standard Gutters

### GALVANIZED OPEN HEARTH STEEL

Always state gauge and girth of material. Crated 250 feet. Gutters with higher backs will be furnished if you specify this additional.

Also made from copper. Prices upon application.

When ordering miters state whether inside or outside are wanted. The net price of miters is the same as the list price of gutter per foot. When ordering Style "A" or "B" gutter miters be sure and inform us what the roof pitch is.

Intermediate girth take list of next higher girth. Gutter Braces shown and listed on page 26.

#### SIZE SPECIFICATION FOR STYLE "A" AND "B"

Girth.....	10 in.	12 in.	14 in.	15 in.	16 in.	18 in.	20 in.	22 in.	24 in.
Depth.....	2 in.	3 in.	3½ in.	3½ in.	4 in.	4½ in.	5 in.	5 in.	6 in.
Apron.....	6 in.	7 in.	8½ in.	9½ in.	10 in.	11½ in.	13 in.	15 in.	16 in.

#### SIZE SPECIFICATION FOR STYLE "C"

Girth.....	10 in.	12 in.	14 in.	16 in.	18 in.	20 in.
Projection.....	4 in.	5 in.	6 in.	7 in.	8 in.	9 in.
Depth.....	2¾ in.	3¼ in.	3⅞ in.	4½ in.	5⅛ in.	5¾ in.

#### SIZE SPECIFICATION FOR STYLE "D"

Girth.....	10 in.	12 in.	14 in.	16 in.	18 in.	20 in.
Projection.....	3 in.	4 in.	5 in.	6 in.	7 in.	8 in.
Depth.....	2¾ in.	3¼ in.	3¾ in.	4⅜ in.	5 in.	5½ in.

#### SIZE SPECIFICATION FOR STYLE "E"

Girth.....	10 in.	12 in.	14 in.	16 in.	18 in.	20 in.
Projection.....	3 in.	4 in.	5 in.	6 in.	7 in.	8 in.
Depth.....	2⅝ in.	3¼ in.	3⅞ in.	4½ in.	5⅛ in.	5¾ in.

#### SIZE SPECIFICATION FOR STYLE "F"

Girth.....	10 in.	12 in.	14 in.	16 in.	18 in.	20 in.
Projection.....	3 in.	4 in.	5 in.	6 in.	7 in.	8 in.
Depth.....	2½ in.	3 in.	3½ in.	4 in.	4⅝ in.	5¼ in.

#### SIZE SPECIFICATION FOR STYLE "G"

Girth.....	10 in.	11 in.	12 in.	13 in.	14 in.	15 in.	16 in.	18 in.	20 in.
Projection.....	3 in.	3½ in.	4 in.	4½ in.	5 in.	5½ in.	6 in.	7 in.	8 in.
Depth.....	2¾ in.	3 in.	3¼ in.	3⅝ in.	4 in.	4¼ in.	4½ in.	5⅛ in.	5¾ in.

#### SIZE SPECIFICATION FOR STYLE "H"

Girth.....	10 in.	12 in.	14 in.	16 in.	18 in.	20 in.
Projection.....	3 in.	4 in.	5 in.	6 in.	7 in.	8 in.
Depth.....	2⅝ in.	3¼ in.	3⅞ in.	4½ in.	5⅛ in.	5¾ in.

#### SIZE SPECIFICATION FOR STYLE "J"

Girth.....	10 in.	12 in.	14 in.	16 in.	18 in.	20 in.
Projection.....	3 in.	4 in.	5 in.	6 in.	7 in.	8 in.
Depth.....	2¾ in.	3⅜ in.	4 in.	4½ in.	5⅛ in.	5¾ in.

#### LIST PRICE PER LINEAL FOOT

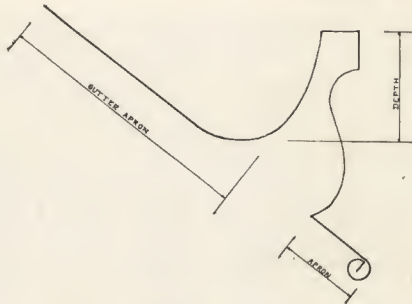
	10 in.	11 in.	12 in.	13 in.	14 in.	15 in.	16 in.	18 in.	20 in.	22 in.	24 in.
No. 29 Gauge.....	\$ .25	\$ .28	\$ .30	\$ .33	\$ .35	\$ .37	\$ .40	\$ .45	\$ .50	\$ .55	\$ .60
No. 28 Gauge.....	.27	.30	.32	.35	.37	.39	.44	.49	.54	.59	.64
No. 27 Gauge.....	.29	.32	.34	.37	.39	.41	.48	.53	.58	.63	.68
No. 26 Gauge.....	.31	.33	.36	.39	.41	.43	.52	.57	.62	.67	.72
No. 24 Gauge.....	.43	.46	.48	.51	.53	.55	.70	.75	.80	.85	.90







## Willis Roof Gutters



Style No. 162



Style No. 198

## Willis Moulded Face Roof Gutters

List Prices Per Lineal Foot

Girth	Apron Nos 162 and 198	Depth		Gutter Apron		No. 29 Gauge	No. 28 Gauge	No. 26 Gauge	No. 24 Gauge
		No. 162	No. 198	No. 162	No. 198				
18 inch	1¼ inch	2¼ inch	2 inch	7¼ inch	6½ inch	\$ .45	\$ .49	\$ .57	\$ .75
20 inch	1½ inch	2½ inch	2¼ inch	7¾ inch	7⅝ inch	.50	.54	.62	.80
24 inch	2 inch	3 inch	2¾ inch	9¾ inch	8¾ inch	.60	.64	.72	.90
28 inch	3 inch	3½ inch	3¼ inch	11½ inch	11 inch	.70	.74	.82	1.18
30 inch	3½ inch	3¾ inch	3½ inch	12½ inch	12 inch	.75	.78	.86	1.22

Intermediate Girths take list of next higher Girth

We can furnish Style No. 198 with inner lining in any grade of tin plate. Use gutter braces to secure the best results.

In ordering miters state whether for inside or outside corners and give pitch of roof. The net price each for miters is the same as list price per foot for gutter.

Makes a very neat finish for the eave, and saves three courses of shingles all around the eaves. When the tinner goes to put up this gutter, he can complete the whole job, as he does not have to wait for the carpenter to lay any shingles. The fall is secured by forcing the apron down into the moulding at the low point and raising the apron up at the high point. Twenty-four inch is the standard size for main roof work.

## Willis Ogee Roof Gutter

Style No. 163



Style No. 163

Girth.....	10 in.	12 in.	14 in.	16 in.	18 in.	20 in.	24 in.
Apron.....	5½ in.	6¾ in.	8½ in.	9¾ in.	11½ in.	12¾ in.	15¾ in.
Depth.....	2¾ in.	2¾ in.	3⅝ in.	3½ in.	3⅝ in.	4¼ in.	5 in.

List Price Per Foot

Girth	10 in.	12 in.	14 in.	16 in.	18 in.	20 in.	24 in.
No. 29 Gauge..	\$ .25	\$ .30	\$ .35	\$ .40	\$ .45	\$ .50	\$ .60
No. 28 Gauge..	.27	.32	.37	.44	.49	.54	.64
No. 27 Gauge..	.29	.34	.39	.48	.53	.58	.68
No. 26 Gauge..	.31	.36	.41	.52	.57	.62	.72
No. 24 Gauge..	.43	.48	.53	.70	.75	.80	.90

Intermediate Girths take list of next higher Girth

When ordering miters state whether inside or outside are wanted and give pitch of roof.

The net price each of miters is the same as the list price of gutter per foot. This style is used the same as "A" or "B," but is much neater.

Also made from Copper. Prices upon application.

## Gutter Braces

No. 331.	List price per doz., Galvanized Sheet Metal.....	\$ .50
No. 332.	List price per doz., Galvanized Band Iron.....	.85
No. 333.	List price per doz., Galvanized Band Iron.....	.80

Made from galvanized materials. Holes punched for bolts and nails



No. 331 No. 332 No. 333

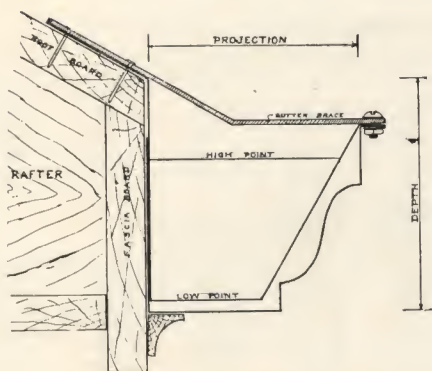


## Willis Double Gutters

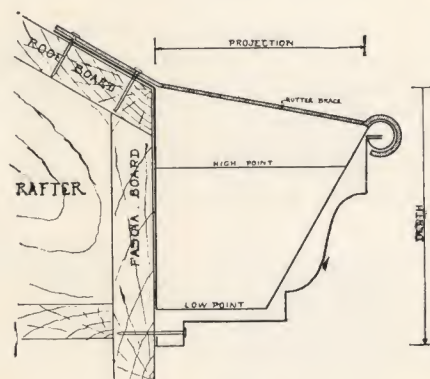
ALWAYS STATE GAUGE WANTED

Galvanized Open Hearth Steel

Also with TIN PLATE for lining and in COPPER



Style No. 286



Style No. 287

We build these gutters to architects' details or we will have our drafting department detail special gutters to your specification.

Special sizes and gauges quoted upon application.

The No. 286 is gutter that is almost entirely fabricated in our shop before shipment and only requires that you make a few joints at the job. The No. 287 comes in a K. D. form, the mouldings are formed, the lining is broken to grade from high to low points and the miters are cut but nothing is assembled as in the No. 286. On orders for the No. 287 gutter, we number each section of moulding and lining and furnish working drawings which simplifies the erection of this style.

To manufacture or quote on either styles of this gutter you should always send us the plans or rough pencil sketch, giving the measurements of the building on the face of fascia board of eaves and showing the correct location of the down spouts.

Style	Projection	Depth	Roof Apron	Galv. O. H. Steel				Galv. Moulding and Tin Lining				Copper	
				No. 29	No. 28	No. 26	No. 24	15 lb. Coat	20 lb. Coat	30 lb. Coat	40 lb. Coat	14 oz.	16 oz.
287	3½ in.	4½ in.	2 in.	\$ .22	\$ .24	\$ .27	\$ .34	\$ .23	\$ .25	\$ .28	\$ .35	\$1.10	\$1.25
287	4½ in.	5½ in.	2 in.	.24	.26	.29	.37	.25	.27	.30	.38	1.20	1.40
287	5½ in.	6½ in.	2 in.	.29	.31	.34	.44	.30	.32	.36	.47	1.40	1.60
287	6½ in.	7½ in.	2 in.	.31	.34	.42	.52	.32	.35	.44	.57	1.65	1.90
285	3½ in.	4 in.	2 in.	.30	.32	.36	.40	.32	.34	.38	.42	1.30	1.50
285	4½ in.	5 in.	2 in.	.36	.40	.45	.50	.38	.42	.47	.52	1.40	1.65
285	5½ in.	6 in.	2 in.	.40	.46	.50	.55	.42	.48	.52	.58	1.60	1.85
285	6½ in.	7 in.	2 in.	.48	.54	.60	.66	.50	.56	.62	.70	1.85	2.10

**Miters**—For Style No. 287. The net price will be twice the list price per foot for the gutter. If the miters are to be soldered together the charge will be three times the list price of gutter.

**Miters**—For Style No. 286. The net price will be three times list price per foot for the gutter.

Specify if you want us to furnish gutter braces. They are illustrated on page 26.





## Eave Troughs; Galvanized O. H. Steel and Copper

### LAP JOINT—SINGLE BEAD GALVANIZED STEEL. List Prices Per Lineal Foot.

Size, inches	3	3½	4	4½	5	6	7	8	9	10
No. 29 Gauge	\$ .13	\$ .14	\$ .16	\$ .18	\$ .19	\$ .23	\$ .27	\$ .31	\$ .36	\$ .40
No. 28 Gauge	.15	.16	.18	.20	.21	.25	.30	.34	.38	.42
No. 27 Gauge	.17	.18	.20	.22	.23	.28	.32	.37	.42	.46
No. 26 Gauge	.19	.20	.22	.24	.25	.30	.35	.40	.45	.50
No. 24 Gauge	....	....	.28	.30	.31	.37	.44	.50	.56	.62

### SINGLE BEAD—LAP JOINT COLD ROLLED COPPER. List Prices Per Lineal Foot

Size, In.	3	3½	4	5	6	7	8	9	10
14 ounce.....	\$ .31	\$ .36	\$ .40	\$ .50	\$ .61	\$ .71	\$ .82	\$ .91	\$1.00
16 ounce.....	.33	.39	.44	.54	.66	.77	.88	.98	1.08
20 ounce.....	.41	.49	.55	.67	.83	.96	1.10	1.22	1.34

### SLIP JOINT—SINGLE BEAD GALVANIZED STEEL. List Prices Per Lineal Foot.

Size, inches	3	3½	4	4½	5	6	7	8	9	10
No. 29 Gauge..	\$ .14	\$ .15	\$ .17	\$ .19	\$ .20	\$ .25	\$ .29	\$ .33	\$ .38	\$ .42
No. 28 Gauge..	.16	.17	.19	.21	.22	.27	.32	.36	.40	.44
No. 27 Gauge..	.18	.19	.21	.23	.24	.30	.34	.39	.44	.48
No. 26 Gauge..	.20	.21	.23	.25	.26	.32	.37	.42	.47	.52
No. 24 Gauge..	....	....	.29	.31	.32	.39	.46	.52	.58	.64

### SINGLE BEAD—SLIP JOINT COLD ROLLED COPPER. List Prices Per Lineal Foot

Size, Inches	3	3½	4	5	6	7	8	9	10
14 ounce.....	\$ .34	\$ .39	\$ .43	\$ .53	\$ .64	\$ .74	\$ .85	\$ .96	\$1.06
16 ounce.....	.36	.42	.47	.57	.69	.80	.91	1.03	1.14
20 ounce.....	.45	.53	.59	.71	.87	1.00	1.14	1.28	1.42

### LAP JOINT—DOUBLE BEAD GALVANIZED STEEL. List Prices Per Lineal Foot.

Size, inches	3	3½	4	4½	5	6	7	8	9	10
No. 29 Gauge....	\$ .16	\$ .17	\$ .19	\$ .21	\$ .22	\$ .26	\$ .30	\$ .34	\$ .39	\$ .43
No. 28 Gauge....	.18	.19	.21	.23	.24	.28	.33	.37	.41	.45
No. 27 Gauge....	.20	.21	.23	.25	.26	.31	.35	.40	.45	.49
No. 26 Gauge....	.22	.23	.25	.27	.28	.33	.38	.43	.48	.53
No. 24 Gauge....	....	....	.31	.33	.34	.40	.47	.53	.59	.65

### DOUBLE BEAD—LAP JOINT COLD ROLLED COPPER. List Prices Per Lineal Foot

Size, inches	3	3½	4	5	6	7	8	9	10
14 ounce.....	\$ .37	\$ .42	\$ .46	\$ .56	\$ .67	\$ .77	\$ .88	\$1.00	\$1.12
16 ounce.....	.39	.45	.50	.60	.72	.83	.94	1.07	1.20
20 ounce.....	.49	.57	.63	.75	.91	1.04	1.18	1.34	1.50

### SLIP JOINT—DOUBLE BEAD GALVANIZED STEEL. List Prices Per Lineal Foot.

Size, inches	3	3½	4	4½	5	6	7	8	9	10
No. 29 Gauge..	\$ .17	\$ .18	\$ .20	\$ .22	\$ .23	\$ .28	\$ .32	\$ .36	\$ .41	\$ .45
No. 28 Gauge..	.19	.20	.22	.24	.25	.30	.35	.39	.43	.47
No. 27 Gauge..	.21	.22	.24	.26	.27	.33	.37	.42	.47	.51
No. 26 Gauge..	.23	.24	.26	.28	.29	.35	.40	.45	.50	.55
No. 24 Gauge..	....	....	.32	.34	.35	.42	.49	.55	.61	.67

### DOUBLE BEAD—SLIP JOINT COLD ROLLED COPPER. List Prices Per Lineal Foot

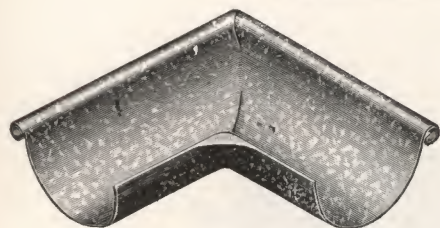
Size, inches	3	3½	4	5	6	7	8	9	10
14 ounce.....	\$ .40	\$ .45	\$ .49	\$ .59	\$ .70	\$ .80	\$ .91	\$1.05	\$1.18
16 ounce.....	.42	.48	.53	.63	.75	.86	.97	1.12	1.26
20 ounce.....	.53	.61	.67	.79	.95	1.08	1.22	1.40	1.58







## Miters: Galvanized Steel and Copper



SINGLE BEAD—LAP JOINT List Price Per Dozen

Size, Inches	3½	4	4½	5	6	7	8
No. 29 Gauge....	\$3.25	\$3.50	\$4.00	\$4.00	\$5.00	\$6.50	\$8.00
No. 28 Gauge....	3.50	3.75	4.25	4.25	5.40	7.00	8.50
No. 27 Gauge....	3.75	4.00	4.50	4.50	5.75	7.50	9.00
No. 26 Gauge....	4.00	4.25	4.75	4.75	6.00	8.00	9.50
No. 24 Gauge....	4.75	5.50	6.50	6.50	7.50	9.00	11.00

DOUBLE BEAD—LAP JOINT AND SINGLE BEAD—SLIP JOINT

Size, Inches	3½	4	4½	5	6	7	8
No. 29 Gauge.....	\$4.25	\$4.50	\$5.00	\$5.00	\$6.00	\$ 7.50	\$ 9.00
No. 28 Gauge.....	4.50	4.75	5.25	5.25	6.40	8.00	9.50
No. 27 Gauge.....	4.75	5.00	5.50	5.50	6.75	8.50	10.00
No. 26 Gauge.....	5.00	5.25	5.75	5.75	7.00	9.00	10.50
No. 24 Gauge.....	5.75	6.50	7.50	7.50	8.50	10.00	12.00

DOUBLE BEAD—SLIP JOINT

Size, Inches	3½	4	4½	5	6	7	8
No. 29 Gauge.....	\$5.25	\$5.50	\$6.00	\$6.00	\$7.00	\$ 8.50	\$10.00
No. 28 Gauge.....	5.50	5.75	6.25	6.25	7.40	9.00	10.50
No. 27 Gauge.....	5.75	6.00	6.50	6.50	7.75	9.50	11.00
No. 26 Gauge.....	6.00	6.25	6.75	6.75	8.00	10.00	11.50
No. 24 Gauge.....	6.75	7.50	8.50	8.50	9.50	11.00	13.00

When ordering Slip Joint Miters, state whether right or left hand is wanted, and whether for "Inside" or "Outside" corner; otherwise half right and half left, and half "inside" and half "outside" corner miters will be supplied.

SINGLE BEAD—LAP JOINT

COLD ROLLED COPPER List Prices Each

Size In.	3½	4	4½	5	6	7	8
14 ounce..	\$ .80	\$ .85	\$ .90	\$ .90	\$ .95	\$1.00	\$1.20
16 ounce..	.90	.95	1.00	1.00	1.05	1.15	1.35

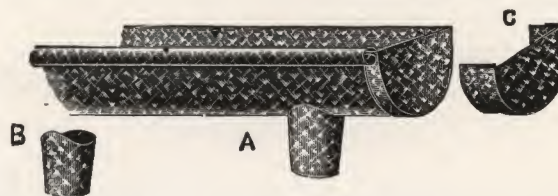
Double Bead, add 25 cents each

SINGLE BEAD—SLIP JOINT

COLD ROLLED COPPER. List Price Each

Size In.	3½	4	4½	5	6	7	8
14 ounce..	\$ .90	\$ .95	\$1.00	\$1.00	\$1.05	\$1.15	\$1.35
16 ounce..	1.00	1.05	1.10	1.10	1.15	1.30	1.50

Double Bead, add 25 cents each



GALVANIZED STEEL. List Price Per Dozen.

No. 29 Gauge

Size, inches	3	3½	4	4½	5	6	7	8
"A" Ends, Single Bead.....	\$2.50	\$2.50	\$2.70	\$3.00	\$3.00	\$3.60	\$4.00	\$4.20
"A" Ends, Double Bead.....	3.10	3.10	3.30	3.60	3.60	4.30	4.75	5.00
"B" Drops only.....	1.00	1.10	1.20	1.30	1.30	1.60	.....	.....
"C" Ends only.....	1.30	1.30	1.50	1.60	1.60	1.90	2.30	2.80

No. 28 Gauge

"A" Ends, Single Bead.....	2.75	2.75	3.00	3.30	3.30	3.95	4.40	4.65
"A" Ends, Double Bead.....	3.40	3.40	3.65	3.95	3.95	4.75	5.25	5.50
"B" Drops only.....	1.10	1.20	1.35	1.45	1.45	1.75	.....	.....
"C" Ends only.....	1.45	1.45	1.65	1.75	1.75	2.10	2.55	3.10

No. 26 Gauge

"A" Ends, Single Bead.....	3.10	3.10	3.40	3.75	3.75	4.50	5.00	5.25
"A" Ends, Double Bead.....	3.90	3.90	4.15	4.50	4.50	5.40	5.95	6.25
"B" Drops only.....	1.25	1.40	1.50	1.65	1.65	2.00	.....	.....
"C" Ends only.....	1.65	1.65	1.90	2.00	2.00	2.40	2.90	3.50

COPPER END PIECES

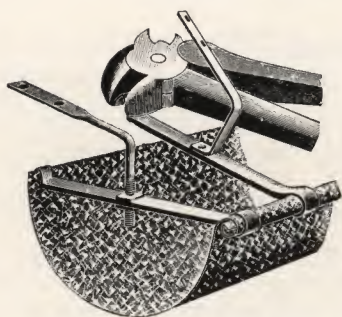
COLD ROLLED COPPER List Price each

Size, inches	2	2½	3	3½	4	4½	5	6	7	8
"A" Ends, Single Bead.....	\$ .....	\$ .....	\$ .95	\$1.00	\$1.05	\$1.10	\$1.10	\$1.15	\$1.30	\$1.50
"A" Ends, Double Bead.....	.....	.....	1.20	1.25	1.30	1.35	1.35	1.40	1.55	1.75
"B" Drops only.....	.35	.40	.40	.45	.45	.48	.48	.50	.60	.70
"C" Ends only.....	.....	.....	.40	.45	.45	.48	.48	.50	.60	.70





## Eave Trough Hangers



### STANDARD TRIPLE TWIST WIRE HANGERS

Size, Inches	3½	4	4½	5	6	7	8
Single Bead, per gross.....	\$2.75	\$2.75	\$3.00	\$3.00	\$3.50	\$4.00	\$4.50
Double Bead, per gross.....	3.00	3.00	3.25	3.25	3.75	4.25	4.75

### STANDARD STEEL HANGERS

With rods and nuts, complete (Adjustable)

Size, Inches	3½	4	4½	5	6	7	8
Single Bead, per gross.....	\$8.00	\$8.50	\$8.70	\$9.00	\$10.00	\$12.00	\$16.00
Double Bead, per gross.....	8.50	9.00	9.20	9.50	10.50	12.50	16.50

### STANDARD STEEL HANGERS

With straps riveted to cross bar, complete

Size, Inches	3½	4	4½	5	6	7	8
Single Bead, per gross.....	\$7.00	\$7.50	\$7.70	\$8.00	\$9.00	\$11.00	\$15.00
Double Bead, per gross.....	7.50	8.00	8.20	8.50	9.50	11.50	15.50

## Round and Flat Head Stove Bolts

Price per 100

Length Inches	¼ and 5/32	3/16	7/32 and ¼	5/16	¾	7/16	½
¾	\$ .85	\$ .85	\$ .85	\$ .85	\$ .85	\$ .85	\$ .85
1	.85	.85	1.20	1.20	1.20	1.20	1.20
1¼	.85	.85	1.20	1.20	1.20	1.20	1.20
1½	.85	.85	1.20	1.75	2.65	2.65	2.65
1¾	.90	.90	1.25	1.80	2.70	2.70	2.70
2	.90	.90	1.30	1.85	2.75	7.30	9.50
2¼	.95	.95	1.35	1.90	2.85	7.30	9.50
2½	1.00	1.00	1.40	1.95	2.90	7.30	9.50
2¾	1.05	1.05	1.45	2.00	3.00	7.30	9.50
3	1.10	1.10	1.50	2.05	3.10	7.30	9.50
3¼	1.15	1.15	1.55	2.15	3.20	7.50	9.80
3½	1.20	1.20	1.60	2.30	3.40	7.70	10.10
4	1.25	1.25	1.70	2.40	3.60	7.90	10.35
4¼	1.30	1.30	1.80	2.50	3.80	8.15	10.65
4½	1.40	1.40	1.90	2.60	4.00	8.35	10.90
4¾	1.50	1.50	2.00	2.70	4.20	8.55	11.20
5	1.60	1.60	2.10	2.85	4.40	8.75	11.50
5¼	1.70	1.70	2.20	3.00	4.60	8.95	11.75
5½	1.80	1.80	2.30	3.15	4.80	9.15	12.00
5¾	1.90	1.90	2.40	3.30	5.00	9.40	12.30
6	2.00	2.00	2.50	3.45	5.20	9.60	12.60
6¼	2.10	2.10	2.60	3.60	5.40	9.80	12.90
6½	2.20	2.20	2.70	3.75	5.60	10.00	13.15
6¾	2.30	2.30	2.85	3.90	5.80	10.25	13.45
7	2.40	2.40	3.00	4.10	6.00	10.45	13.73
7¼	2.50	2.50	3.15	4.30	6.20	10.65	14.00
7½	2.60	2.60	3.30	4.50	6.40	10.85	14.28
7¾	2.75	2.75	3.45	4.70	6.60	11.05	14.55
8	2.90	2.90	3.60	4.90	6.80	11.30	14.83
8¼	3.05	3.05	3.75	5.10	7.00	11.50	15.10

## Tinners Rivets

Price Lists and Dimensions

SIZES	Metallic Tinned Pkgs. of 1000	Length In Inches	Diameter B. W. G.
1 lb.	\$ .47	13/64	11¾
1¼ lb.	.54	1/32	11
1½ lb.	.64	15/64	10¾
1¾ lb.	.72	1/4	10
2 lb.	.79	17/64	9¾
2½ lb.	1.00	9/32	9
3 lb.	1.15	5/16	8¾
3½ lb.	1.34	21/64	8
4 lb.	1.49	11/32	7¾
5 lb.	1.88	3/8	6¾
6 lb.	2.17	25/64	6
7 lb.	2.54	13/32	5¼
8 lb.	2.90	7/16	4¾

**LIST EXTRAS**—For 25 and 50 lb. boxes, deduct 2 cents per lb. For 100 and 200 lb. Kegs, deduct 4 cents per lb.

## Tin Flashings

LIST PRICES PER 1000

	4x5	5x7	7x10
Tin Painted .....	\$12.00	\$17.00	\$33.00
Galvanized .....	15.00	23.00	40.00





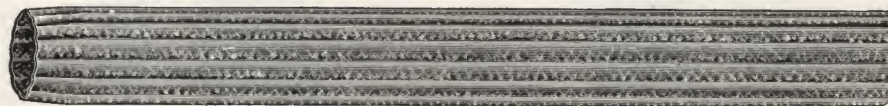
## Galvanized Conductor Pipe

ALL SIZES MADE IN 10 FOOT LENGTHS

Crated 250 feet

Corrugated Round

Plain Round



### GALVANIZED STEEL

#### List Prices Per Lineal Foot

Size, Inches	1½	2	2½	3	3½	4	5	6
No. 29 Gauge.....	\$ .11	\$ .13	\$ .14	\$ .15	\$ .18	\$ .20	\$ .25	\$ .30
No. 28 Gauge.....	.13	.15	.16	.17	.20	.23	.28	.33
No. 27 Gauge.....	....	.17	.18	.19	.22	.25	.31	.37
No. 26 Gauge.....	....	.19	.20	.21	.24	.28	.34	.40
No. 24 Gauge.....	....	....	....	.27	.31	.35	.44	.52

### MADE FROM COLD ROLLED COPPER

#### List Prices Per Lineal Foot

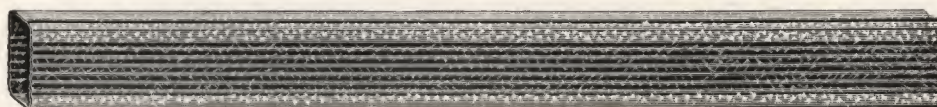
Size, Inches	1½-2	2½-3	3½-4	4½-5	6
14 ounce.....	\$ .40	\$ .50	\$ .65	\$ .85	\$1.00
16 ounce.....	.43	.54	.70	.92	1.08
20 ounce.....	.54	.67	.88	1.15	1.35

## Galvanized Conductor Pipe

ALL SIZES MADE IN 10 FOOT LENGTHS.

Crated 250 feet

Corrugated Square



### GALVANIZED STEEL

#### List Prices Per Lineal Foot

Size, Inches	2	3	4	5
No. 29 Gauge.....	\$ .15	\$ .17	\$ .22	\$ .27
No. 28 Gauge.....	.17	.19	.25	.30
No. 27 Gauge.....	.19	.21	.27	.33
No. 26 Gauge.....	.21	.23	.30	.36
No. 24 Gauge.....	....	.29	.37	.46
Standard measurements.....	1¾x2¼	2¾x3¼	2¾x4¼	3¾x5

Perfectly formed, seams cannot come apart

### MADE FROM COLD ROLLED COPPER

#### List Prices Per Lineal Foot

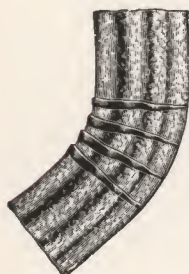
Size, Inches	2	3	4	5
14 ounce.....	\$ .42	\$ .52	\$ .67	\$ .87
16 ounce.....	.45	.56	.72	.94
20 ounce.....	.56	.70	.90	1.18



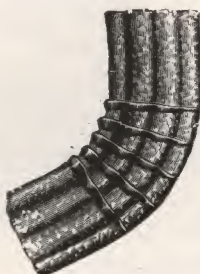


## Galvanized Elbows and Shoes

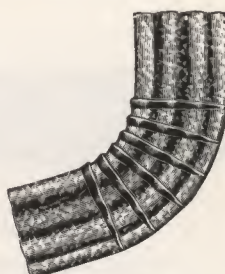
PLAIN ROUND AND CORRUGATED



No. 1—45°



No. 2—60°



No. 3—75°



Shoe—75°

List Prices Per Dozen

Size, Inches	2	3	4	5	6
Galvanized Steel Elbows.....	\$ 3.60	\$ 4.32	\$ 7.20	\$15.00	\$18.00
Galvanized Steel Shoes.....	4.80	5.76	9.00	18.00	21.60
14 ounce Copper Elbows.....	8.40	10.80	16.20	24.00	34.20
14 ounce Copper Shoes.....	9.00	12.00	18.00	27.00	37.80
16 ounce Copper Elbows.....	9.00	12.00	18.00	27.00	37.80
16 ounce Copper Shoes.....	10.20	13.20	19.80	30.00	42.00

## Galvanized Corrugated Square Elbows

List Prices Per Dozen—Styles A and B



Style A

Size, Inches	2	3	4	5
Galvanized Steel Elbows.....	\$ 4.80	\$ 6.00	\$ 7.80	\$12.00
Galvanized Steel Shoes.....	6.00	7.20	9.60	15.00
14 ounce Copper Elbows.....	10.20	13.20	19.20	28.80
14 ounce Copper Shoes.....	10.80	14.40	21.60	33.00
16 ounce Copper Elbows.....	10.80	14.40	21.60	33.00
16 ounce Copper Shoes.....	12.60	16.20	24.00	36.00



Style B

## Improved Galvanized Cut-Off

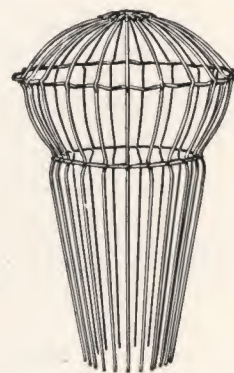


No Solder Used. No Joints to Break  
Best on Market

Price List

3 inch, per dozen, galvanized.....	\$ 8.00
4 inch, per dozen, galvanized.....	11.00
5 inch, per dozen, galvanized.....	20.00
6 inch, per dozen, galvanized.....	24.00

## The Standard Galvanized Conductor Strainer



Price List

2 inch diameter, per dozen.....	\$1.50
3 inch diameter, per dozen.....	2.00
4 inch diameter, per dozen.....	3.00
5 inch diameter, per dozen.....	5.00
6 inch diameter, per dozen.....	6.00





## Cast Iron Boots and Sewer Connections



PRICE LIST. All 4½ ft. long

For other than standard lengths figure same rate per foot plus 20 per cent for alteration of patterns.

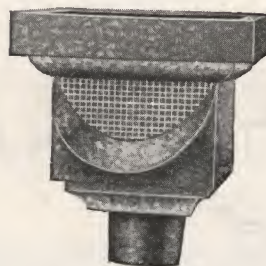
	H. & G. No.	D. & G. No.
3 inch. Each.....	\$5.45	\$5.60
4 inch. Each.....	6.45	7.00
5 inch. Each.....	7.80	8.10
6 inch. Each.....	8.80	9.50

## Conductor Heads

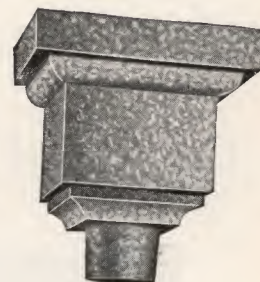
MADE ANY DESIGN WANTED



No. 336



No. 337



No. 338

	Style		
	336	337	338
3 in.	\$ 2.00	\$ 4.00	\$ 3.50
4 in.	2.50	4.50	4.00
5 in.	3.00	5.00	4.50
6 in.	3.50	5.50	5.00

## "Never-Slip" Conductor Hooks

For Plain Round or Corrugated Conductor

PRICE LIST PER 100



	Wood	Brick
2 inch, per 100.....	\$3.50	\$4.60
3 inch, per 100.....	6.00	6.75
4 inch, per 100.....	7.20	9.70
5 inch, per 100.....	12.30	13.20
6 inch, per 100.....	16.40	18.50

For wood and brick. Also hooks for square conductor.

## "Perfection" Wire Conductor Pipe Hanger

PRICE LIST PER 100



2" No. 12 Wire.....	\$2.00
3" No. 11 Wire.....	2.50
4" No. 10 Wire.....	3.00
5" No. 9 Wire.....	3.50
6" No. 8 Wire.....	4.00





## Ridge and Hip Roll—Ridge and Hip Cap

GALVANIZED O. H. STEEL



With Nailing Flange. Made in 10-foot Lengths. Crated 250 feet

List Prices Per Lineal Foot

Girth, inches	6	7	8	10	12	14
No. 29 Gauge.....	\$ .13	\$ .14	\$ .16	\$ .19	\$ .23	\$ .28
No. 28 Gauge.....	.15	.16	.18	.21	.25	.30
No. 27 Gauge.....	.17	.18	.20	.23	.27	.32
No. 26 Gauge.....	.19	.20	.22	.25	.29	.34
No. 24 Gauge.....	.25	.26	.28	.31	.35	.40

## Galvanized Formed and Rolled Valley

OPEN HEARTH STEEL



No. 144. Galvanized Valley

Will furnish formed to your drawing without additional charge



No. 145. Roll Valley

In Rolls of 50 feet and 100 feet lengths

List Prices Per Lineal Foot

Girth, inches	10	12	14	18	20	24	28	30
No. 29 Gauge.....	\$ .12½	\$ .15	\$ .17½	\$ .23	\$ .25	\$ .30	\$ .35	\$ .37
No. 28 Gauge.....	.14½	.17	.19½	.25	.27	.32	.37	.39
No. 27 Gauge.....	.16½	.19	.21½	.27	.29	.34	.39	.41
No. 26 Gauge.....	.18½	.21	.23½	.29	.31	.36	.41	.43
No. 24 Gauge.....	.24½	.27	.29½	.35	.37	.42	.47	.49

## Continuous Hip Finish

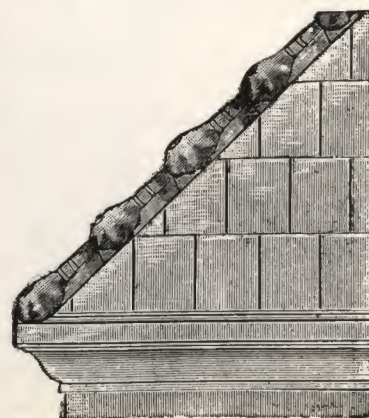


List Price 5" Girt.....\$5 00 per 100 ft.

### WILLIS ORNAMENTED HIP SHINGLES

List Prices per 1000

	4x7	4x9	5x12
Tin Painted .....	\$10.00	\$12.50	\$20.00
Galvanized .....	15.50	16 50	30.00





# Tin and Cornice Shop Tools---Niagara Make

Niagara Adjustable  
Pipe Folder



No. 1380

Forming Rolls—Plain



No. 1376

Adjustable Roofing  
Tongs

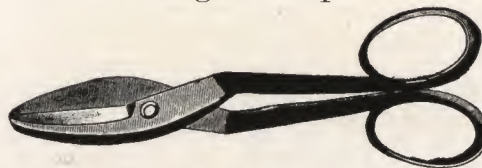


No. 1368

Rivet Headers and Sets



Niagara Snips



No. 1339

Number	6 1/2	7	8	9	10
Length of jaws from pivot.....in.	4 7/8	4 1/2	4	3 1/2	3 1/8
Net weight.....ounces	52	42	32	26	19

Gutter Tongs



No. 1366

Deep Throat  
Roofing Tongs



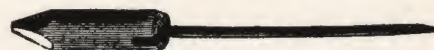
No. 1367

Roofing Tongs

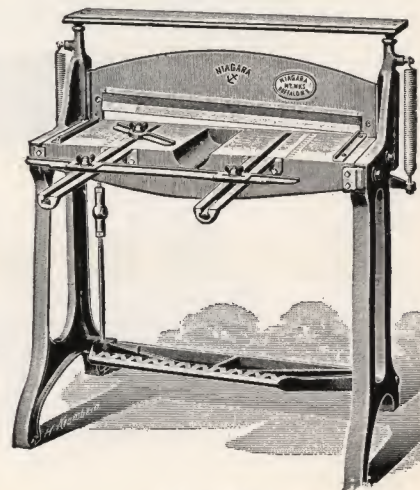


No. 1365

Soldering Coppers



Squaring Shears



No. 1373

We can furnish prices on a complete set of tools. Let us figure on your wants, whether little or big. It gives us pleasure to figure with you; should you not see all you are in the market for, you should send a description of the same. We feel confident we can fill all your wants.

Hammers, rivet sets, chisels, folders, beading machines, brakes, all kinds roofing tools, shears, stakes, slating and tile roofing tools, beading, burring and turning machines, mallets, fire-pots, soldering coppers and handles.

A complete special catalog will be mailed you promptly upon receipt of your request.

Prices on all tools furnished on application.





## Metal Lath



Our metal lath is made by the latest process which assures our customers of a material which is rigid and easy to handle. The small, neat mesh is formed by the natural bend of the strands in expanding. The narrow strands allow the mortar to completely imbed the lath on all sides, the clinch bonding on the back.

This lath is made true to gauge from the best quality of sheets and can be easily formed to special shapes for cornices, moulding, etc.

Lath carried in stock for immediate shipment is painted black. Lath galvanized before and after forming or lath made from copper bearing sheets can be furnished with reasonable promptness from mill.

	Weight per square yard
Gauge 27.....	2.33 lbs.
Gauge 26.....	2.55 lbs.
Gauge 25.....	3.00 lbs.
Gauge 24.....	3.40 lbs.
Gauge 22.....	4.20 lbs.

Size of sheet: 27"x96". Number sheets in bundle: 10. Number of yards in bundle: 20.

Prices on application.

## Willis Wall Ties



Made from galvanized material only in weights 22 gauge to 28 gauge inclusive. Packed in strong wire bound wooden boxes containing one thousand ties each.

List Price.....	\$6.00 per thousand
Shipping weight.....	55 lbs. per thousand

Sample sent on request.



## Corner Bead, Base Ground, Picture Mould

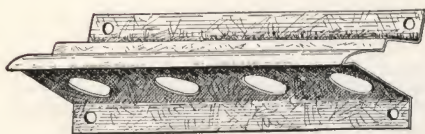


Style No. 1



Our Corner Bead, Base Ground and Picture Mould are of the latest patterns, designed with a thought of economy in cost of material and application all made true to gauge of the best grades of materials.

We believe our customers will find among the styles illustrated a design for every requirement.



Style No. 49

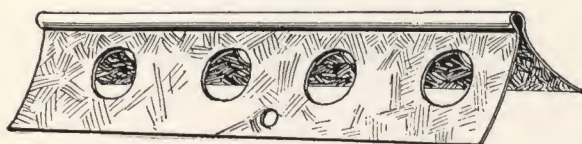


Style No.	Gauge	Wt. Per 1000 ft.
No. 100	26	175 lbs.
No. 15	28	181 lbs.
No. 604	26	256 lbs.
No. 1	26	197 lbs.
No. 49	26	175 lbs.
No. 23	26	229 lbs.

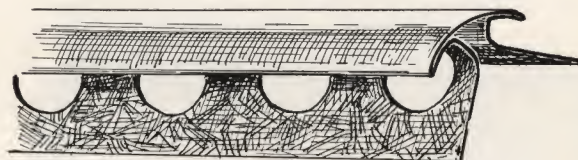
No. 100, No. 15 and No. 604 is carried in 6, 8, 9, and 10 ft. lengths.

No. 1, No. 49 and No. 23 is carried in 10 ft. lengths only.

Prices on application.



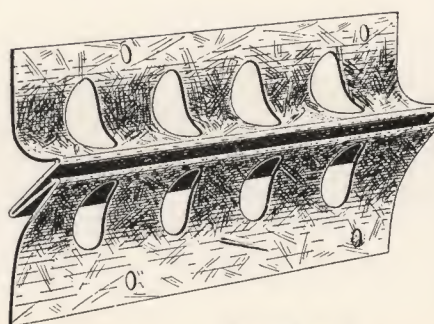
Style No. 100



Style No. 604



Style No. 15



Style No. 23







## Best Bloom Galvanized



### STANDARD DIFFERENTIALS AND EXTRA

Galvanized Sheets

Extra For Gauge

Gauge	Per 100 lb.
30 add .....	\$ .50
29 add .....	.25
28 .....	Base
27 deduct .....	.15
26 deduct .....	.30
25 deduct .....	.30
24 deduct .....	.45
22 deduct .....	.45
20 deduct .....	.60
18 deduct .....	.60
16 deduct .....	.75
14 deduct .....	.90

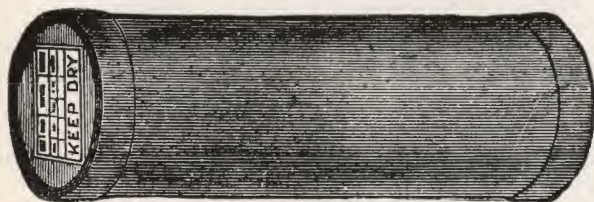
### STANDARD DIFFERENTIALS AND EXTRA

(Galvanized Sheets and Long Terne Sheets—Continued)

#### EXTRA FOR LENGTH

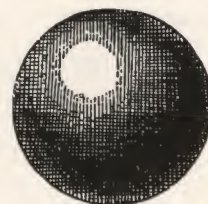
Gauge	Length	Extra Per Hundred Pounds
16 and Heavier.....	60 to 144".....	None
16 and Heavier.....	Under 60 to 30".....	5c
16 and Heavier.....	Under 30 to 18".....	10c
17 to 18.....	Over 60 to 120".....	None
17 to 18.....	Over 120 to 132".....	5c
17 to 18.....	Over 132 to 144".....	10c
17 to 18.....	Under 60 to 30".....	5c
17 to 18.....	Under 30 to 18".....	10c
19 and Lighter.....	Over 60 to 120".....	None
19 and Lighter.....	Over 120 to 144".....	10c
19 and Lighter.....	Under 60 to 30".....	10c
19 and Lighter.....	Under 30 to 18".....	20c

## Sheet Zinc



Illinois Zinc Co.'s Sheet Zinc is recognized by all as the standard of quality. We carry a stock of No. 10 gauge 36x108.

Prices quoted on application.



## Spun Half Balls

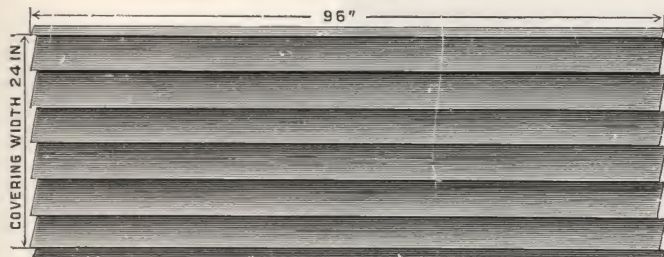
	Zinc	Copper
1 in. Per 100.....	\$ 3.00	
1½ in. Per 100.....	4.00	
2 in. Per 100.....	6.40	
2½ in. Per 100.....	7.40	
3 in. Per 100.....	9.00	
3½ in. Per 100.....	11.60	
4 in. Per 100.....	15.60	
5 in. Per 100.....	21.00	
6 in. Per 100.....	32.00	
7 in. Per 100.....	38.80	
8 in. Per 100.....	54.00	
9 in. Per 100.....	60.00	
10 in. Per 100.....	76.00	
11 in. Per 100.....	96.00	
12 in. Per 100.....	120.00	
16 in. Per 100.....	320.00	
18 in. Each .....	6.00	
20 in. Each .....	9.00	
22 in. Each .....	12.00	
24 in. Each .....	16.00	

Prices on Application.



## Imitation Weather Boarding

PAINTED OR GALVANIZED

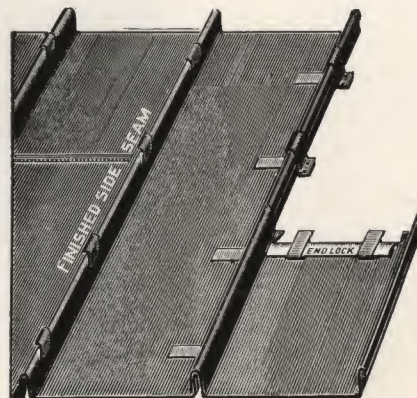


No. 1394

Sheets cover 24 inches. Regular lengths, 8 feet.

## Pressed Standing Seam

PAINTED OR GALVANIZED



No. 1397

Sheets cover 24 in. 6, 7, 8, 9 and 10 ft. long

## V Crimped Roofing

PAINTED OR GALVANIZED

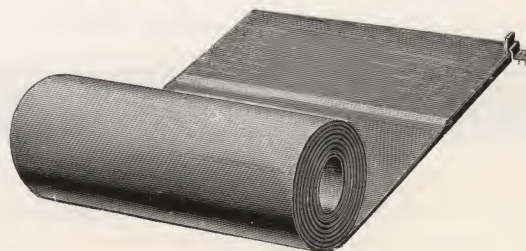


No. 1395

Sheets cover 24 inches. 6, 7, 8, 9 and 10 ft. long.

Plain or Self Capping Roll Roofing  
With Cleats

PAINTED OR GALVANIZED



No. 1390

In 50 ft. rolls, 26½ in. wide. 100 square ft. each.

## 3 V or Middle Crimped Roofing

PAINTED OR GALVANIZED



No. 1396

Sheets cover 24 inches, 6, 7, 8, 9, and 10 feet long  
Covering width charged.

Wood strips are not included unless otherwise specified

Prices are quoted on receipt of specifications covering the requirements.

Should you desire we will be glad to figure quantities if you will supply us with the information as to sizes of buildings, etc.





Beaded Ceiling  
PAINTED OR GALVANIZED



No. 1393

Sheets cover 24 inches. Regular lengths, 8 feet.  
Prices quoted on application. Specify quantities and kind.

Steel Ceiling

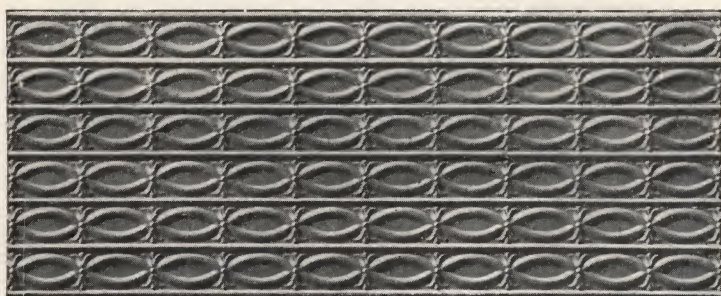


Plate No. 4100  
Size 24x96. List price, 7¼c per sq. ft.

Greek Cornice Mould

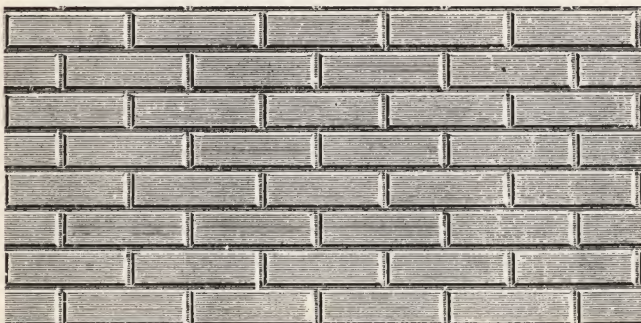


No. 4335

Depth 3 in. Projection 3 in. Length 48 in. List price, 5½c per lin. ft.

Plain Steel Siding

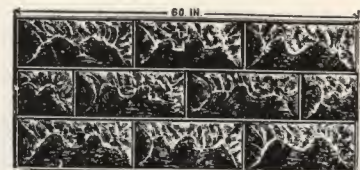
PAINTED OR GALVANIZED



No. 802

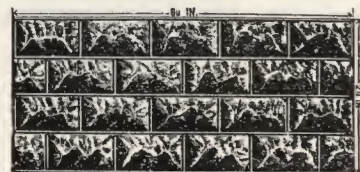
Size of single brick, 2 4-5x8¼ in. Sheets, 28x60 in.

Rock Faced Stone Siding—Large



No. 1392

Rock Faced Stone Siding—Small



No. 1391

Rock Faced Steel Brick Siding

PAINTED OR GALVANIZED



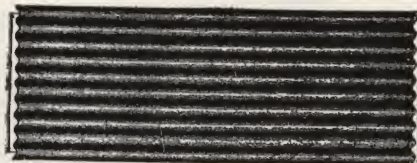
No. 803

Size of single brick, 2 4-5x8¼ in. Sheets, 28x60 in.



# Corrugated Sheet for Roofing and Siding

## OPEN HEARTH STEEL



Standard Differentials and Extras for Galvanized and Painted Formed Products per 100 Lbs. over Corresponding Gauges of Flat Sheets

Extras per Square are based on weight per square multiplied by extra per 100 lbs.

PAINTING				
FORMING	GAUGES			
	29	25 to 28	19 to 24	12 to 18
Red Oxide of Iron .....	.25	.20	.15	.....
2-2½-3 and 5" Corrugated .....	.05	.05	.05	.05
⅝-1¼" Corrugated .....	.10	.10	.10	.....
2 V-Crimp—without sticks.....	.05	.05	.05	.....
3 V-Crimp—without sticks.....	.10	.10	.10	.....
Pressed Standing Seam— with cleats .....	.....	.15	.15	.....
Plain Roll Roofing —with or without cleats.....	.15	.15	.15	.....
Beaded Ceiling .....	.....	.25	.25	.....
Weatherboard Siding .....	.....	.25	.25	.....
Plain Brick Siding.....	.20	.20	.....	.....
Rockfaced Brick and Stone Siding.....	.....	.25	.....	.....

ADDITIONAL EXTRAS				
	GAUGES			
	29	25 to 28	19 to 24	12 to 18
Corrugating Sheet				
Crosswise.....	.10	.10	.10	.10
Curving—Corrugated				
Sheets, Single Curve.....	.25	.25	.25	.25
Curving—Corrugated				
Sheets, Double Curve.....	.50	.50	.50	.50
Forming—Sheets under 60"				
long to 30" inclusive.....	.05	.05	.05	.05
Forming—Sheets under 30"				
long to 20" inclusive.....	.10	.10	.10	.10
Forming—Sheets under				
20" long .....	.25	.25	.25	.25

Lengths—Standard Lengths of all forms are 60, 66, 72, 78, 84, 90, 96, 102, 108, 114, 120, 132 and 144 inches. Flat Sheet Extras will apply on Lengths over 120 inches or shorter than 60 inches.

Sticks for V-Crimp Roofing, 25 cents per 100 lineal feet.

## Formed Roofing Sheets

### Standard Weights Per Square

Length of Sheets	2½ inch Corrugations (Sheet 26 in. wide)	1¼ inch Corrugations (Sheet 25 in. wide)
60 inches	9.231	9.600
72 inches	7.692	8.000
84 inches	6.593	6.857
96 inches	5.759	6.000
108 inches	5.128	5.333
120 inches	4.616	4.800
144 inches	3.846	4.000

Weight of bands not included

In order to insure uniformity it is essential that the square weights given in the following table be observed when Formed Sheets for Roofing are sold by the square.

Length of Sheets	2½ inch Corrugations (Sheet 26 in. wide)	1¾ inch Corrugations (Sheet 25 in. wide)
60 inches	10.833	10.416
72 inches	13.000	12.500
84 inches	15.166	14.583
96 inches	17.333	16.666
108 inches	19.500	18.750
120 inches	21.666	20.833
144 inches	26.000	25.000

[illegible]





## Finials



No. 102. Hip



No. 101. Gable



No. 56. Hip

No. 56. Gable



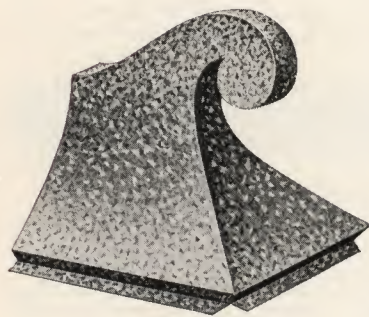
No. 124. Used on Ridge Roll



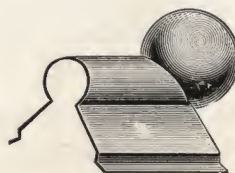
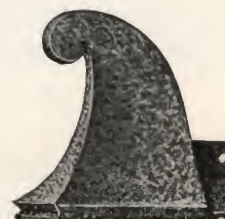
No. 97



No. 103



No. 121. Hip

Ball Finials  
Used With Ridge Roll

No. 98. Hip or Gable

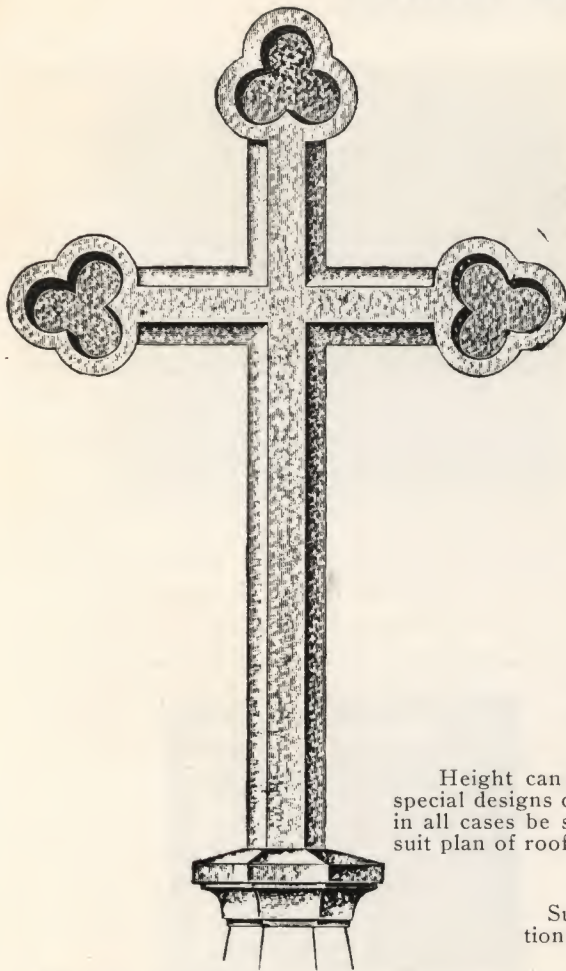
Style No.	Height	List Price Each
101 Gable.....	11"	\$4.00
102 Hip.....	11"	4.00
56 Hip.....	12"	4.00
56 Gable.....	12"	4.00
103 Hip or Gable.....	10"	4.00
121 Hip.....	10"	4.00
98 Hip or Gable.....	12"	3.50
97 Hip or Gable.....	24"	5.00
124 Used with Ridge Roll.....	9"	.80

Ball Finials for use with Ridge Roll:

2½" Ball for 1¼" Ridge Roll.....	\$4.00 per dozen
3 " Ball for 1½" Ridge Roll.....	5.00 per dozen
4 " Ball for 2 " Ridge Roll.....	6.00 per dozen



## Tower and Gable Crosses



No. 292. Height 10 ft. Price.....\$72.00



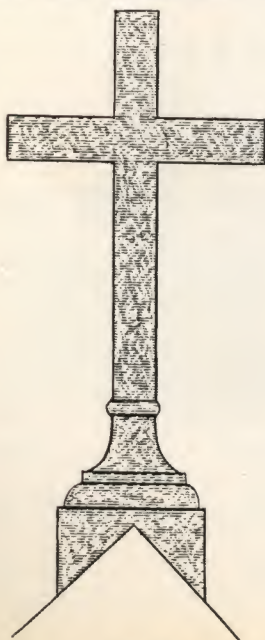
No. 1324  
7 ft. high. Price.....\$60.00



No. 1325  
6 ft. high. Price.....\$50.00

Height can be made to suit. Quotations will be made on special designs of Crosses. The plan and pitch of the roof should in all cases be sent with the order. The bases will be made to suit plan of roof without additional charge.

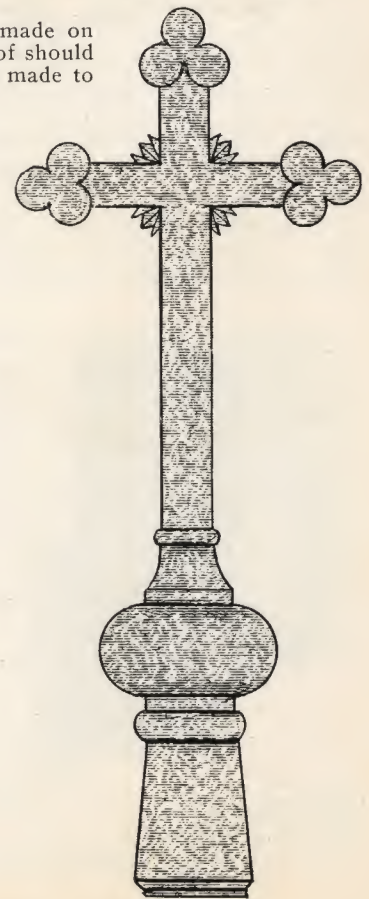
Submit architect's details for quotations. Any sheet metal will be employed.



No. 82  
Height 6 ft. Price.....\$24.00



No. 1326  
Height 5 ft. Price.....\$42.00



No. 83  
Height 8 ft. Price.....48.00





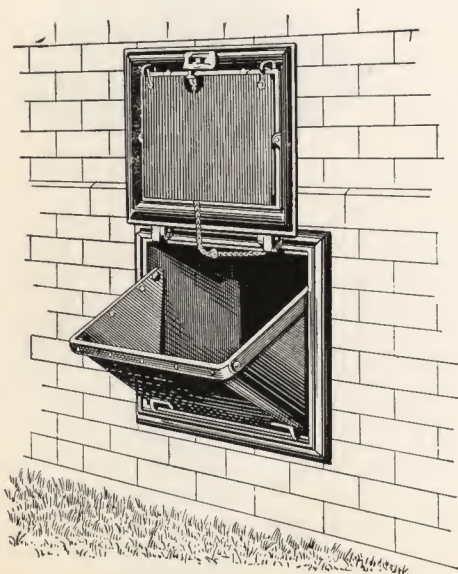
## Foundation Coal Chutes



Foundation Chute with Glass Panel

Style B chute interchangeable with Style A, by merely adding the  $\frac{1}{4}$ -inch wire glass. Style C is the same as Style A only it has no hopper. Style D is the same as Style B without a hopper.

In the style No. 101 and No. 203 Chutes the doors are solid. No provision is made for changing over to a glass front chute. Otherwise their construction, in the various styles, conforms to the various styles of the other chutes. Style B with hopper. Style D without hopper. The No. 500 and No. 600 Special are built particularly for 8-inch basement walls. They have 9-inch straight bottom bodies instead of the sloping bottoms, used in the No. 10 and No. 101 styles. The No. 500 has a cast door—the No. 600 a glass panel door. Neither has hoppers. These chutes are used principally for speculative and industrial building.



Foundation Chute Open

Styles 10A and 20A are more than coal chutes—they are windows as well.

The doors are fitted with  $\frac{1}{4}$ -inch wire glass, secured by adjustable wire clips making it possible to change over to a steel front chute at any time.

When closed, the chute hopper and protecting shield lies flat on the bottom of the chute, allowing the daylight to shine into the coal bin, lighting the basement.

When open, the steel protecting shield lies over the glass, giving it ample protection from being broken. The door automatically locks open and when the hopper is pulled out is ready to receive the coal.

In homes where a well-lighted basement is desirable, these chutes are ideal.

Style B is the same as Style A with a steel panel replacing the glass front. For this panel the Style A steel protecting shield is used. This makes the



Foundation Chute with Steel Panel

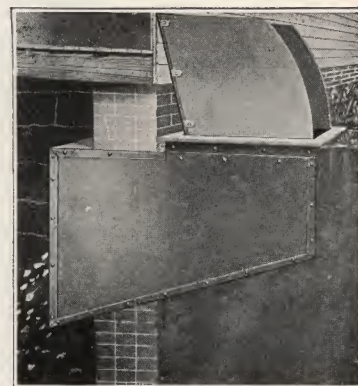
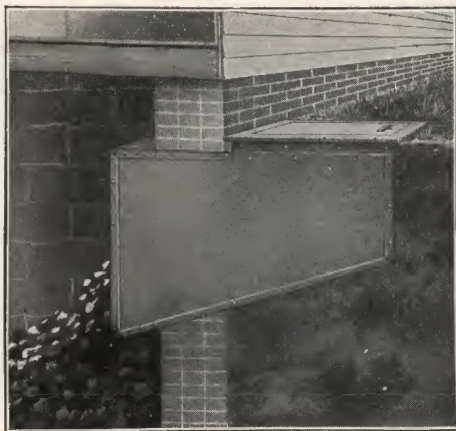
### FOUNDATION CHUTES

Number	Style	Description	Weight
10	A	Glass Panel & Hopper.....	85 lbs.
10	B	Steel Panel & Hopper.....	75 lbs.
10	C	Glass Panel No. Hopper.....	70 lbs.
10	D	Steel Panel No. Hopper.....	60 lbs.
20	A	Glass Panel & Hopper.....	160 lbs.
20	B	Steel Panel & Hopper.....	140 lbs.
20	C	Glass Panel No. Hopper.....	140 lbs.
20	D	Steel Panel No. Hopper.....	120 lbs.
101	B	Cast Door & Hopper.....	80 lbs.
101	D	Cast Door No. Hopper.....	65 lbs.
500		Cast Door No. Hopper.....	57 lbs.
600		Glass Panel No. Hopper.....	63 lbs.
203	B	Cast Door & Hopper.....	150 lbs.
203	D	Cast Door No. Hopper.....	130 lbs.

Prices on Application.



## Grade Line Coal Chutes



Where a building has no foundation above ground, or has a very low one, the grade line chute is used. It can also be used in store buildings where the floor level is flush with the sidewalks.

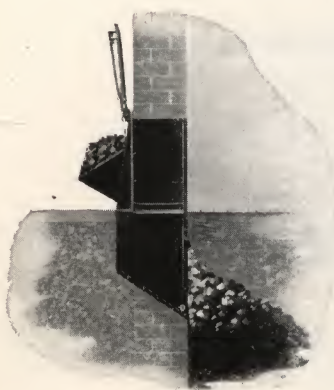
The door and frame are made of heavy cast semi-

steel. They can even be driven over by a wagon without damage. The hopper sides are boiler plate. The body is made up of steel plate and angle iron.

The Grade Line Coal Chute can be unlocked only from the inside.

Number	Size Door	Wall Width	Opening H'g't	Length	Weight
16	18x24	25"	24"	36"	190 lbs.
18	24x30	31"	31"	42"	290 lbs.

## Store Chutes



The Store Chute was designed particularly for store and office buildings. It does away with the sidewalk coal hole and protects property owners from putting up bonds for the protection of pedestrians.

It is built in the same durable way as all of our other Coal Chutes.

This Chute can also be used in homes where the grade line and floor are on the same level.



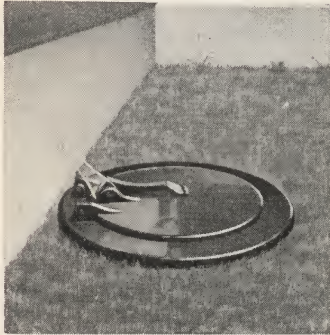
Number	Size of Door	Total Height	Opening at Grade	Wt.
12	22" Width	20" Height	48"	180 lbs.
15	30" Width	24" Height	52"	285 lbs.

Prices on Application.





## Underground Garbage Receivers



The Underground Garbage Receiver provides a convenient and sanitary method of garbage disposal. It is buried in the ground, close to the kitchen door where it emits no odors and is safe from dogs and vermin. It does away entirely with the fly nuisance.

The only part exposed is the top and door. To empty garbage, just raise the step with the foot and press down. This opens the door. The top of the Receiver is chained to the shell to prevent its being carried off.

When garbage can is filled, the garbage man simply takes off the iron top and lifts out the garbage can. The Underground Garbage Receiver comes in three sections—a rustproof receptacle for the garbage can, the garbage can, and the cast iron top and lid.

To install, just dig a hole the size of the receptacle and lower can into the ground.

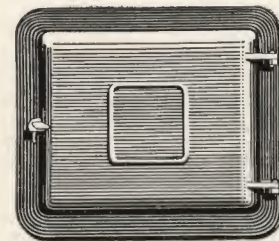
When desired cast iron top and can only will be furnished for use in a concrete pit.

The exposed garbage pail as compared with our Underground Garbage Receiver, is a costly proposition. The cost is within the reach of everyone.

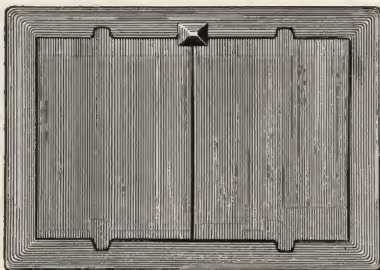
### UNDERGROUND GARBAGE RECEIVERS

Number	Shell Diam.	Shell Depth	Can Capacity	Weight
14	14"	14"	6 gal.	40 lbs.
18	16"	18"	9 gal.	45 lbs.
22	16"	22"	11 gal.	50 lbs.
26	16"	26"	15 gal.	55 lbs.
28	19"	28"	20 gal.	90 lbs.
30	19"	30"	25 gal.	100 lbs.

### Ash Pit or Flue Cleanout Doors



### Ash Dumps



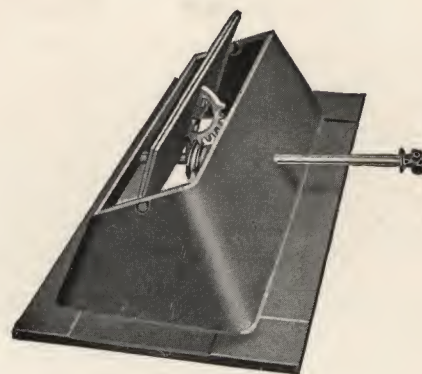
Size, Inches	Wt., Each Pounds	Size, Inches	Wt., Each Pounds
8 x 8	8	12 x 15	24
7 x 9	8	15 x 15	35
8 x 10	9	24 x 18	60
10 x 12	16	30 x 24	70

6 x 6 inside dimensions (single lid), weight 4 pounds each.  
 8 x 8 inside dimensions (single lid), weight 6 pounds each.  
 7 x 10 outside dimensions (double lid), weight 4 pounds each.

Prices on Application.



## "Improved" Dome Damper and Throat for Fire Places



Note wide flanges on front and sides, which allow great freedom in arranging angle of side walls.

The front flange is wide enough to carry one course of brick. Where more than one course is to be laid, then a 3 in. by 3 in. or 4 in. by 4 in. steel angle may be placed along lower edge of frame. The frame has a rib under the front flange for holding the angle and anchoring the face brick to the rest of the wall.

On this damper the cover is hinged in the center, which results in easy operation and prevents locking in case brick or mortar is accidentally dropped on it during construction of the chimney.

Operation is by a worm gear that does not get

fouled by soot. The rod is long and can be quickly adjusted in length by loosening a set screw in the worm. Knob at end of rod is cast brass, polished, shows direction to turn and has wide flange to conceal any rough opening in brick or tile.

The dome forms a throat that is smooth and acts as the connection between the fireplace and the chimney flue. The contractor builds up the side walls of the fireplace to proper height, sets the damper in place, then goes ahead laying up the rest of the wall. Hardly any fitting is necessary. It is easy to build around the damper rod.

The damper acts as the roof of the fireplace and by its use considerable time is saved over other forms of construction.

### SPECIFICATIONS FOR IMPROVED DOME DAMPERS.

	Front Length	Rear Length	Depth	BASE ON DOME			Weight Each
				*Front	Rear	Depth	
No. 15a	30 in.	25 in.	13 $\frac{3}{4}$ in.	24 $\frac{1}{2}$ in.	21 in.	10 in.	30 lbs.
No. 16a	34 in.	29 in.	13 $\frac{3}{4}$ in.	28 $\frac{1}{2}$ in.	25 in.	10 in.	34 lbs.
No. 17a	38 $\frac{1}{2}$ in.	33 $\frac{1}{2}$ in.	13 $\frac{3}{4}$ in.	33 in.	28 $\frac{1}{2}$ in.	10 in.	39 lbs.
No. 17 $\frac{1}{2}$ a	42 in.	37 in.	13 $\frac{3}{4}$ in.	36 in.	32 in.	10 in.	42 lbs.
No. 18a	44 $\frac{1}{2}$ in.	39 $\frac{1}{2}$ in.	13 $\frac{3}{4}$ in.	39 in.	35 in.	10 in.	44 lbs.
No. 19a	54 in.	49 in.	13 $\frac{3}{4}$ in.	49 in.	45 in.	10 in.	61 lbs.
No. 20a	60 in.	55 in.	13 $\frac{3}{4}$ in.	55 in.	51 in.	10 in.	73 lbs.
No. 21a	78 in.	73 in.	13 $\frac{3}{4}$ in.	72 in.	68 in.	10 in.	80 lbs.

\*In selecting a Damper for a fireplace use the size in this column nearest the width of the fireplace opening, but see that the Damper is long enough to span the opening and give proper support.

The frames and covers of the Improved Dampers are so constructed that by changing the levers and brackets they can be made into ratchet dampers.

Prices on Application.





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